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MANAGING EDITOR / ÉDITEUR EN CHEF

Dr. Patrice Racine DIALLO

EDITOR / ÉDITEUR

Dr. Patrice Racine DIALLO

CONTACT

Editor / Éditeur

editor@infinancejournal.com

Technical support / Assistance technique

editor@infinancejournal.com

Email

editor@infinancejournal.com

Web

<https://infinancejournal.com/>

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EDITOR'S NOTE:

We are delighted to introduce the inaugural issue of our Interdisciplinary Finance and Development Journal (IFDJ). One of the main reasons for creating this journal is to support the research environment in Mali and Africa, while making a significant contribution on an international scale. In this first issue, we have assembled a diverse collection of articles addressing various themes such as financial markets, accounting, logistics, and economics.

This first issue symbolizes the result of many months of hard work and collaboration between researchers, practitioners, and experts from different backgrounds. Each article has been carefully selected for its innovative contribution and relevance to the current context of economic and financial challenges.

Among the articles presented, you will find an in-depth analysis of financial market trends, case studies on innovative accounting practices, research on logistics optimization, and economic reflections on sustainable development. We have also included works on Zakat accounting, illustrating our commitment to exploring diverse perspectives and enriching the academic dialogue.

Our goal with this journal is to create a dynamic platform where ideas can be freely exchanged and where researchers can find inspiration for their future work. We firmly believe that collaboration and knowledge sharing are essential for progress and innovation.

We wish to express our deep gratitude to all those who contributed to the realization of this first issue: the authors for their intellectual contributions, the reviewers for their expertise and constructive criticism, and the editorial board members for their unwavering support.

We hope that this first issue will generate interest, inspire new research, and strengthen international collaborations. We look forward to seeing the positive impacts this journal will have in the field of finance and development.

Happy reading!

Editor

Dr. Patrice Racine DIALLO

NOTE DE L'ÉDITEUR:

C'est avec un réel plaisir que nous vous présentons le premier numéro de notre Revue Interdisciplinaire de Finance et de Développement (RIFD). L'une des raisons principales de la création de cette revue est de soutenir l'environnement de la recherche au Mali et en Afrique, tout en apportant une contribution significative à l'échelle internationale. Nous avons rassemblé un ensemble diversifié d'articles qui abordent des thèmes variés tels que les marchés financiers, la comptabilité, la logistique et l'économie.

Ce premier numéro symbolise le fruit de nombreux mois de travail acharné et de collaboration entre des chercheurs, des praticiens et des experts de différents horizons. Chaque article a été soigneusement sélectionné pour son apport novateur et sa pertinence dans le contexte actuel des défis économiques et financiers.

Parmi les articles présentés, vous trouverez une analyse approfondie des tendances des marchés financiers, des études de cas sur les pratiques comptables innovantes, des recherches sur l'optimisation logistique, ainsi que des réflexions économiques sur le développement durable. Nous avons également inclus des travaux sur la comptabilité de la Zakat, illustrant notre engagement à explorer des perspectives variées et à enrichir le dialogue académique.

Notre objectif avec cette revue est de créer une plateforme dynamique où les idées peuvent s'échanger librement et où les chercheurs peuvent trouver l'inspiration pour leurs travaux futurs. Nous croyons fermement que la collaboration et le partage des connaissances sont essentiels pour le progrès et l'innovation.

Nous tenons à exprimer notre profonde gratitude à tous ceux qui ont contribué à la réalisation de ce premier numéro : les auteurs pour leurs contributions intellectuelles, les relecteurs pour leur expertise et leurs critiques constructives, et les membres du comité éditorial pour leur soutien indéfectible.

Nous espérons que ce premier numéro suscitera l'intérêt, inspirera de nouvelles recherches et renforcera les collaborations internationales. Nous sommes impatients de voir les impacts positifs que cette revue aura dans le domaine de la finance et du développement.

Bonne lecture!

Éditeur

Dr. Patrice Racine DIALLO

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Option Pricing in Periods of Negative or Low- Interest Rates: Case of European Type of Options

Armand-Charles NGABIRANO ¹, Prof.Dr. Güven SEVİL ²

Master's student, Anadolu University Department of Business and Finance,
ngabirado.armandcharles91@gmail.com, ORCID: 0000-0003-2503-5157

Prof.Dr., Anadolu University Department of Business and Finance,
gsevil@anadolu.edu.tr, ORCID: 0000-0001-7592-3799

ABSTRACT

The negative interest rates policy that was implemented to help the economy to recover from a recession, pushed the market to revise some pricing models. The Black Scholes model in the current situation where rates are below zero fails to price interest rate options since it only allows positive rates in its formula. Besides the Black Scholes model, the Heston Cox Ingersoll also doesn't allow negative inputs of interest rates. Deloitte in February 2016 introduced a new pricing regime based on inserting a shifting parameter to existing pricing models like the Black Scholes and the SABR models. This work, analyses the performance of the shifted Black Scholes model in the negative rate environment. In this study, we also conduct a comparative study of pricing models, by providing their performance based on speed, complexity, and market applicability. According to empirical findings, the shifted Black Scholes model performs very well in the negative rate environment. Even though finding the right shift parameter and generating the implied volatility can be challenging, the shifted Black Scholes, especially when backed with the Montecarlo simulation, is equipped with enough tools to price interest rate options when rates are below zero.

Keywords: Shifted Black model, Option pricing, Negative rates, Implied volatility, Stochastic volatility, Interest rates products

L'évaluation des Options en Période de Taux D'intérêt Négatifs ou Faibles : Cas des Options de Type Européen

RÉSUMÉ

La politique de taux d'intérêt négatifs mise en œuvre pour aider l'économie à sortir de la récession a poussé le marché à revoir certains modèles de tarification. Dans la situation actuelle où les taux sont inférieurs à zéro, le modèle de Black Scholes ne permet pas de déterminer le prix des options sur taux d'intérêt, car il n'autorise que les taux positifs dans sa formule. Outre le modèle de Black Scholes, le modèle de Heston Cox Ingersoll ne permet pas non plus de prendre en compte les taux d'intérêt négatifs. En février 2016, Deloitte a introduit un nouveau régime de tarification basé sur l'insertion d'un paramètre de décalage dans les modèles de tarification existants tels que les modèles Black Scholes et SABR. Ce travail analyse la performance du modèle Black Scholes décalé dans un environnement de taux négatifs. Dans cette étude, nous menons également une étude comparative des modèles de tarification, en fournissant leurs performances basées sur la vitesse, la complexité et l'applicabilité au marché. D'après les résultats empiriques, le modèle de Black Scholes décalé est très performant dans un environnement de taux négatifs. Même si trouver le bon paramètre de décalage et générer

la volatilité implicite peut s'avérer difficile, le modèle de Black Scholes décalé, en particulier lorsqu'il est soutenu par la simulation de Montecarlo, est doté de suffisamment d'outils pour fixer le prix des options sur taux d'intérêt lorsque les taux sont inférieurs à zéro.

Mots clés: *Modèle de Black décalé, Évaluation des options, Taux négatifs, Volatilité implicite, Volatilité stochastique, Produits de taux d'intérêt*

INTRODUCTION

Although The recent financial crisis in 2008 revealed the trustworthiness between counterparties as a major concern in financial transactions. The downfall of some financial institutions affected the World's economy. For many, trading became complex or hardly affordable (underpricing, overpricing, credit risk). In order to avoid this chaotic situation bringing a halt to the economy, central banks, especially in Europe, implemented some exceptional measures. Interest rates were lowered in order to make borrowing cheaper (Deloitte, 2016). The idea is to invite investors to borrow money and inject it into the economy. On June 5th, 2014, this process was taken even further, and negative interest rates were observed for the first time in history. Technically a negative rate implies that putting money in a deposit account will result in a loss. Central banks, as a result, punish investors and central banks for holding their cash. This new policy was supposed to inspire investors to bring in new money, which might as a result, contribute to long-term economic growth.

Using negative interest rates has major economic consequences and requires considerable technical implications. Models that help fix prices for derivatives usually require (high) positive risk-free rates, which therefore becomes challenging in the negative rates environment. For example, the Cox Ingersoll Ross short rate model only works with positive inputs and, as a result, can not be used for negative interest rates. The famous Black Scholes model used primarily in pricing European options strongly works under the assumption that rates can never be negative. The question remains: What derivative pricing model should be used for accurate results in periods of low or negative rates?

Options theory has a long and rich history. The elaboration of the Black Scholes model as a tool of option pricing in 1973 made options trading much more practical. Since that year, traders have widely used the Black Scholes model to price with accuracy options. With the implementation of negative rates, specific models like the Hull and White, the Heston Vasicek, and the Bachelier are regaining their popularity again.

This study will mainly insist on some existing pricing models. As pricing derivatives require a strong understanding of stochastic calculus, the first part reviews the dynamics behind options pricing. From the simple understanding of the Brownian Motion theory to the concept of option pricing under zero-coupon bonds, the first part of this study will provide the necessary pieces of information used in derivative pricing. Along with some python simulations, real-life market examples will be calibrated to get a strong understanding of the theoretical part of this study.

A shift parameter is added to Black's formula for the main problem of pricing under negative rate dynamics. By assuming that the LIBOR rate follows a log-normal process, the concept of shifting a distribution is very similar to the idea of displacement. The process allows moving the probability density along the X-axis to cover the negative territory.

LITERATURE REVIEW

Interest rates are associated with the idea that a lender request a premium for undertaking the risk of lending money; hence, the logical argument that interest rate is modeled to be positive (Haksar and Kopp, 2020). Traditionally, a model that gives a negative interest rate due to pricing was considered

inefficient. With the current situation, most developed countries' interest rates follow a negative trend; models like the Hull- White and the Bachelier were overlooked due to their acceptance of negative values, while underlying pricing assets tend to be taken into consideration. The Hull- White model in the classic book of Brigo Mercurio, states that there is a possibility of short rates " r " going to 0. However, such assessment exists only in the Gaussian distribution theory, which has a minor impact on pricing derivatives like options. An alternative model to the Hull- White is the Bachelier model, where interest rates can be negative, as proposed by Louis Bachelier (1900).

In February 2016, Deloitte, prior to the surge of negative interest rates, proposed the shifted Black Scholes, which consists of adding a shift to the traditional Black Scholes to allow negative input of negative interest rates. However, the model does not tackle the volatility observed in the market; hence the use of a shifted SABR model that is almost similar to the shifted Black Scholes but includes necessary features for the implied volatility. Hagan and collaborators introduced the SABR model in 2002. The model owes its popularity to the fact that it incorporates the implied volatility features of the Black Scholes. The derivation of the SABR model implies certain truncations, which leads to some minor errors. An equivalent way to see the breakdown of the SABR model is to price butterfly spreads which, due to the positivity of the convexity of the cap payoff, should remain positive. Despite its considerable errors, the SABR is still preferably used when pricing the vanilla types of options.

The classic Black Scholes model assumes a constant normal volatility parameter. Practitioners agreed to an implied volatility model to tackle the volatility observed in the market. Local volatility dynamics can be extended to calibrate or measure the implied volatility in Black's formula, but they will still lead to erroneous results in risk metrics dynamics. The SABR model proposed by Hagan in 2002 is a two-factor model that follows the Brownian Motion and incorporates some approximative dynamics of the implied volatility observed in the market. The model is unreliable in a negative rate environment unless it has added a shifting parameter. Luuk Hendrick Frankena (2016) analyzed three different solution methods to cope with negative rates while hedging options. The normal Bachelier has a normal distribution and presents a considerable advantage because it does not have to add a shifting parameter to cope with negative rates. The normal SABR model can be used in a negative rate context; the only disadvantage was the assumption of positive probability on significant negative rates. As a solution, Frankena proposed three boundary models for their capacities of modeling rates from the entire real line without introducing some additional parameters. Pricing and hedging European- type options with different expiries dates require accurate calibration. The SABR can only solve this problem by extending the model with dependent parameters.

Agustin Pineda (2017) analyzed 3 derivative pricing models. Among them, arbitrage-free models are suitable for market pricing curves. The shifted SABR model was designated as well-performing among alternative competitors. The models showed outstanding results for both in-sample and strike out-of-sample analysis. However, when dealing with out-of-sampling maturity, the performance seemed to alter.

A study of six models on options traded on the SP500 was done by Bruce Tsoe Jin (2019): the standard Black Scholes model, the black S- Vasicek model, the BS cox Ingersoll model, the standard Heston Hull White model, the Heston- Vasicek model, and the Heston- Cox Ingersoll model. The main purpose was to highlight how models perform under low or negative rates and how accurate they could be when it comes to pricing options. Among the analyzed models, those that assume a cox Ingersoll interest rates types do not perform well in negative rates. The simulated prices present more errors than other models without CIR interest rate calibrating models. The standard Black Scholes model had the worst performance because it does not incorporate the volatility present in the market. Plus, it is known to accept positive values unless a shift parameter is added. The standard Heston model and the Heston

Vasicek had the best performance amongst all the studied models. Bruce Tsoe Jin (2019) suggested adding a shift on the CIR model and a Heston stochastic volatility model to give accurate derivatives prices in periods of low-interest rates.

DATA AND METHODOLOGY

In this study, the notoriety of the famous pricing model Black's 76 is preserved. Since the model itself doesn't recognize negative rates, a shift parameter is assigned to the model in order to enable its capacity of dealing with negative rates. Python is going to be used in order to calibrate and price European type of options (caplets and floorlets for our case).

Price of caplets and floorlets are used for the shifted black model's implementation. The model's calibration is done in Python where numpy for design and matplotlib for maths formulas and graphs design are the first features to be imported for the model's calibration. When calibrating the shifted black model, the first step is to generate the shifted Brownian Motion for a caplet or a floorlet paths. The second step is essentially based on the probability density function where negative value on the axis are recovered by the shift parameter. The last part is for the option price where all the shift parameters follow a same trend to converge on the same price.

The shifted model can also be backed by the exact solution of the montecarlo simulation. Even though its application is not mandatory when pricing, the montecarlo simulation is a good tool for the verification of the exact price of an option.

Pricing derivatives under negative rates: Theory and practice.

a) The Brownian motion.

Derivatives like every other following a Weiner process or a Brownian motion. It's then very important before every pricing process to understand the dynamics behind the Brownian motion.

Let us assume that every time a coin is flipped in the air and lands on heads, a person "x" earns a dollar. When the same coin lands on tale, the same person "x" will lose a dollar. Mathematically it can be represented by: $R_i: \pm 1$ (randomness or changes).

Outcomes will therefore be summed up by $S_i: \sum_{j=1}^i R_j$ (3.0)

The Brownian Motion also includes two popular properties in probabilities: the Markov property and the martingale property. Both insist on the randomness of a variable. The Markov property insists that past solutions do not impact or influence future solutions. The martingale property states that an expected outcome always equals the present outcome. With the martingale property, our example's expected return or outcome can mathematically be represented by: $E\left[\frac{S_j}{S_i}, i < j\right] = S_i$. (3.1)

To make the randomness of every solution continuous, we use the Brownian motion. To demonstrate to continuity of the randomness, we divide it into "n" over the time "t."

The Brownian Motion has the following properties:

- $E[X(t)]=0$ and $E=[X(t^2)]=t$

-The Brownian Motion is continuous

-The Brownian Motion obeys the martingale property: $E[X(t)/X(\tau), \tau < t] = X(\tau)$

- The Brownian Motion follows a normality relation where $\tau < t$ with a mean reversion "0" and a standard deviation $\sqrt{t} * \tau$.

One approach to developing a more realistic model for asset price, which still retains the properties of the random walk as the market efficiency suggests it, is to derive a continuous-time model from random walks. One way to do it is to take the limit as the number of jumps in any unit of time goes to infinity. If this procedure is done, there is necessary to scale down or shrink the size of jumps. For instance, the variance will go to infinity.

Let $\sigma^2 = \text{var}(X_j)$

$$\lim \text{var}(S_m) = \lim_{m \rightarrow \infty} \text{var}(\sum_{j=1}^m X_j) \quad (3.2)$$

$$\begin{aligned} \text{By independence we will have} &= \lim_{m \rightarrow \infty} \sum_{j=1}^m \text{var}(X_j) \\ &= \lim_{m \rightarrow \infty} m\sigma^2 = \infty \quad (3.3) \end{aligned}$$

The jumps X_j of size 1 must be scaled down for the limit to be sensible. The jumps should reduce by dividing by some factor.

$$\frac{X_j}{\alpha}$$

The question that can arise here is how α should be chosen.

The central limit theorem suggests that:

$$\alpha = \sqrt{m}: \lim_{m \rightarrow \infty} (\sum_{j=1}^m \frac{X_j}{\sqrt{m}}) = \lim_{m \rightarrow \infty} \sum_{j=1}^m \text{var}(\frac{X_j}{\sqrt{m}}) \quad (3.4)$$

$$\text{The probability theory allows us to use: } \text{var}(\alpha x) = \alpha^2 \text{var}(x) \quad (3.5)$$

By independence, we will then have

$$\lim_{m \rightarrow \infty} \sum_{j=1}^m \frac{1}{m} \text{var}(X_j) = \lim_{m \rightarrow \infty} \frac{1}{m} \sum_{j=1}^m \sigma^2 = \lim_{m \rightarrow \infty} \frac{1}{m} m\sigma^2 = \sigma^2 \text{ with } \sigma^2 < \infty \quad (3.6)$$

Suggests that \sqrt{m} is the right scaling. Here the purpose is to consider the limit as the number of time steps m per unit gets large. For any real-time $t \geq 0$ the number of jumps will be some integer closer to mt . Scaled random walk is going to be defined by $s_t^{(m)} = \sum_{j=1}^{[mt]} \frac{X_j}{\sqrt{m}}$

Here $[m]$ is the floor function, which is the greatest integer less than X , so for example, $[3, 7] = 3$; $[0, 9] = 0$.

The Brownian Motion is a continuous-time stochastic process conventionally denoted $W(t)$ with the following properties:

0. $W(0) = 0$ with probability 1.
1. The sample paths are continuous with probability 1
2. For $t < s < r$ $W(s) - W(t)$ is independent of $W(r) - W(s)$
3. For any $t, s \geq 0$. $W(t) - W(s)$ is normally distributed with a mean 0

The independence of jumps in the random walk passes to the independence of increments in the limit. The random walk converges to Brownian Motion in an exact sense $s_t^{(m)} \rightarrow W(t)$ as $m \rightarrow \infty$. In the sense of weak convergence of stochastic processes.

The Brownian Motion with a drift

A model should support a trend to be a suitable representation of asset prices. The Brownian Motion is not sufficient because the expectation stays 0 all the time.

In order to remedy this, a term that represents a trend has to be added to the Brownian motion. It is also desirable to add a volatility factor σ . Brownian Motion with drift is the stochastic process $W(t, \mu, \sigma) = \mu t + \sigma W(t)$ (3.7)

μt is the drift term, and time allows adjustments of the volatility of the Brownian Motion term (Etienne and Vallois, 2007).

b. The Black Scholes Model

The Ito's lemma process can help to derive the Black Scholes model and obtain its PDE equation:

Let's consider $S(t)$ an asset's price and $V(s, t)$ an option price. With the stochastic formula of a stock's price behavior:

$dS = \mu S dt + \delta S dz$, under the following assumptions:

$\pi =$ a position taken for a given underlying asset

$$\pi = V - \Delta S \text{ (The hedging factor) (3.8)}$$

(4.0) can also be expressed: $d\pi = dV - \Delta ds$. With the multidimensional derivation of Ito's lemma we will have (Chalamandaris & G. Malliaris, 2009):

$$dV = \frac{\partial V}{\partial S} dS + \frac{\partial V}{\partial t} dt + \frac{1}{2} \delta^2 S^2 \frac{\partial^2 V}{\partial S^2} dt \quad (3.9)$$

$$d\pi = \frac{\partial V}{\partial S} dS + \frac{\partial V}{\partial t} dt + \frac{1}{2} \delta^2 S^2 \frac{\partial^2 V}{\partial S^2} dt - \Delta dS \quad (3.10)$$

$$d\pi = \frac{\partial V}{\partial S} dS + \frac{\partial V}{\partial t} dt + \frac{1}{2} \delta^2 S^2 \frac{\partial^2 V}{\partial S^2} dt - \Delta dS \quad (3.11)$$

$$d\pi = \left(\frac{\partial V}{\partial S} - \Delta \right) dS + \left(\frac{\partial V}{\partial t} + \frac{1}{2} \delta^2 S^2 \frac{\partial^2 V}{\partial S^2} \right) dt \text{ if we choose } \Delta = \frac{\partial V}{\partial S} \text{ then}$$

$$d\pi = \left(\frac{\partial V}{\partial t} + \frac{1}{2} \delta^2 S^2 \frac{\partial^2 V}{\partial S^2} \right) dt. \text{ To avoid arbitrage, the equation is often interpreted this way}$$

$d\pi = r\pi dt$ if we replace π by its real value we will have: $d\pi = r(V - \Delta S)dt$ the PDE equation of the Black Scholes will finally be obtained by replacing $d\pi$ by its derivative values:

$$\left(\frac{\partial V}{\partial t} + \frac{1}{2} \delta^2 S^2 \frac{\partial^2 V}{\partial S^2} \right) dt = (rV - r \frac{\partial V}{\partial S} S) dt$$

$$= \frac{\partial V}{\partial t} + \frac{1}{2} \delta^2 S^2 \frac{\partial^2 V}{\partial S^2} + rS \frac{\partial V}{\partial S} - rV \quad (3.12) \text{ (the partial differential equation of the Black Scholes model)}$$

After the transformation of the partial differential equation the black schole model for options pricing can be described as the following for both put and calls:

$$C = SN(d_1) - N(d_2)K e^{-r(T-t)} \quad (3.13)$$

$$\text{For puts options: } P = N(d_2)K e^{-r(T-t)} - SN(d_1) \quad (3.14)$$

With:

$$d_1 = \frac{\ln\left(\frac{S}{K}\right) + \left(r + \frac{\sigma^2}{2}\right)(T-t)}{\sigma\sqrt{T-t}}. \text{ And}$$

$$d_2 = d_1 - \sigma\sqrt{T-t}$$

Where:

- S is the stock price.
- K is the option strike price.
- $T - t$ is the time to maturity).
- r is the risk free of interest rate.
- \ln is the natural logarithm.
- σ the volatility of the stock.

For negative rates pricing the simple Black Scholes model can't be used since it doesn't allow negative inputs of interest rates unless a shift parameter is added to the model.

The shifted Black Scholes model.

In this work, the shifted Black is proposed as the alternative solution to pricing options under negative interest rates. The application case will be done on caplets and floorlets prices with some set of data collected from Thomson Reuters.

* Pricing caplets under negative rates

Caplets or floorlets can be priced under negative rate environment by an adaptation of the underlying dynamics of the libor rate. The process consist in adding a shift parameter to the libor rate in the case of a European option we add a shift parameter to the Euribor observed on the market. The shift added to the libor rate is defined the following way:

$$\hat{l}(t) = l_k(t) + \theta_k \quad (4.0)$$

The process of the libor rate is governed by the log normal process under the following Dynamics:

$$d\hat{l}(t; T_k - 1, T_k) = \hat{\sigma}_k \hat{l}(t; T_k - 1, T_k) dW_k^K(t). \quad (4.1)$$

Shifting the process simply means moving the probability density along the X-axis. The shift process requires some sort of the delicacy when choosing a shift parameter. A pricing expert have to make sure that the chosen shift is closer to zero. To make sure of the convergence, one can always back up the pricing formula with the exact simulation of the montecarlo although it's not necessary all the time.

The pricing formula with the shift parameter of a caplet is given by: $V_k^{cpl}(t_0) = N_k T_k P(t_0, T_k) [\hat{l}_k(t_0) N(d_1) - \hat{K}_k N(d_2)]$ (4.2) with

$$d_1 = \frac{\log\left(\frac{\hat{l}(t_0; T_k - 1, T_k)}{K}\right) + \frac{1}{2}\sigma_k^2 K(T_k - t_0)}{\sigma_k(\sqrt{T_k - t_0})} \text{ and}$$

$$d_2 = d_1 - \sigma K \sqrt{T_k - t_0}$$

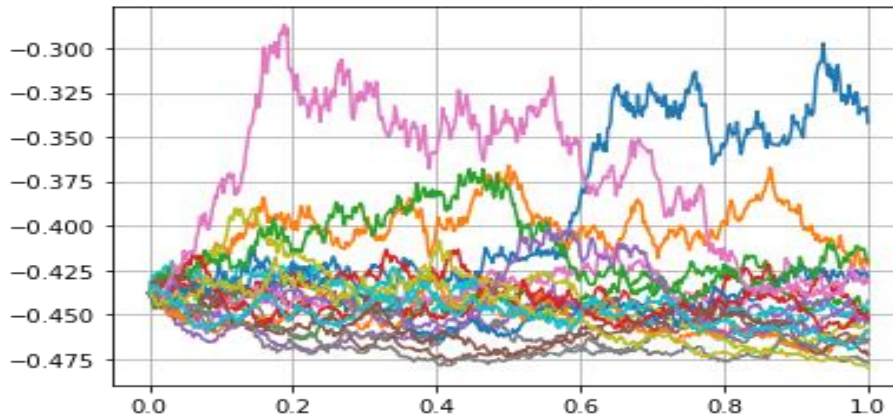
Shifting parameters are included in the libor rate with $\hat{K} = K + \theta_k$ and $\hat{l}_k(t_0) = l_k(t_0) + \theta_k$ (4.3)

EMPIRICAL FINDINGS

For an application example we first simulate an option of a one year maturity with an Euribor of 3M at -0.461 the shift parameter is 0.5, the strike price is 0.445 the log normal volatility is 0.75% we get the following results step by step

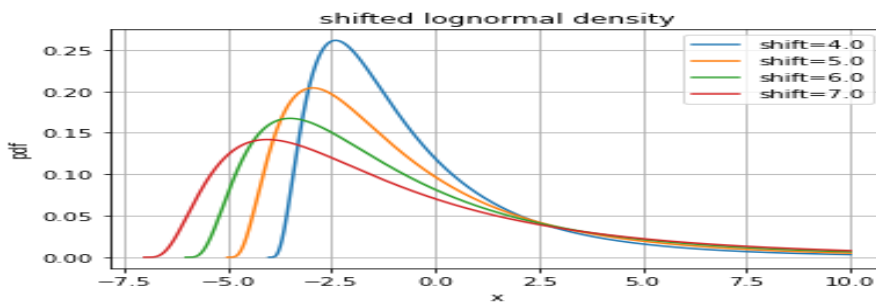
- The shifted brownian motion:

Figure 1: Caplets paths under the Brownian motion



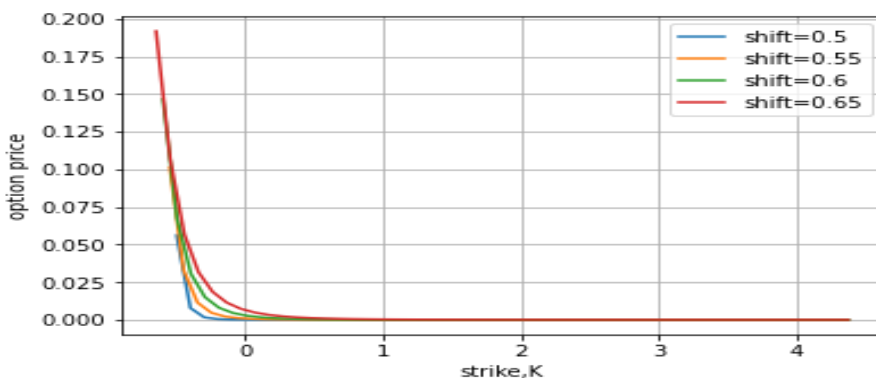
- The shifted log normal density:

Figure 2: Recovering negative values with the shift parameter



- The real option price

Figure 3: Real options prices



Shift parameters determines the lowest level of negative interest rates. However due to constant change of the Euribor, the shift parameter has to be adjusted frequently. The challenging part about the shifted Black model is that it has to be manipulated with precaution. The shift parameter must not be very bigger than the actual labor rate. It has to be the closest possible. Due to that argument of the right shift

parameter to use, the market convention often provides the informations on the right shift parameter to use.

The shift parameter is always associated with the time to maturity of the underlying. The shifted black model is slightly different from the classic Black Scholes model. In order to prevent negative rates to impact the strike price the shift parameter is also added to the strike parameter. The strike price becomes $\hat{K} = K + \theta_k$ under the new libor $\hat{l}_k(t_0) = l_k(t_0) + \theta_k$

The only problem with the shifted black model, the implied volatility has to be found which may lead some practitioner to prefer the shifted SABR model over the shifted Black model. In practice, when calibrating the shifted Black model, the implied volatility has to be calculated. If a wrong volatility value is used, the option price will be erroneous.

CONCLUSION

Negative rates like stated in the introductive part of this study, are somehow a new concept that was established in order to boost the economy that was recovering from a recession. Denmark was the first to implement negative rate policy in 2012 followed by the European central bank in 2016.

The implementation of negative rates can have both positive and negative impacts. On one hand borrowing becomes cheaper and there's a lot of cash inflows in the economy. On the other hand rate cuts below zero, implies for commercial bank that there's no longer cash reserves to hold on since it can result into a money- loss activity. With negative rates, comes the problem of reviewing pricing models like it's the case for derivatives where classic models like the Black Scholes model were built under the assumption that rates will never become negative.

The derivative world has a lot of pricing models each with different features. In this study, simple European type of options were analysed. The less models are complex, the more they are likely to be used on the market. When it's question of speed there's no doubt fast fourier transform models give accurate results. For large and complex numbers the Montecarlo simulation is often preferred.

Choosing a pricing model depends on the type of instrument one wants to price. Among the appropriate models for negative interest rates, the Hull and White model and the SABR model, we choosed to work with shifted Black Scholes model as it seems to be the model with huge stability that can handle any type of derivative and with less complexity. The SABR model has a good performance when it comes to the negative rate environnement because it can also incorporate a shift parameter in its features. The only problem with that model is it's complexity but as advised by deloitte (october 2016), the free boundary SABR by Antonov et al seems less complex when dealing with negative rates. The Hull and White model is gaussian distribution type of model. Which implies that there is a probability of rates being negatives. The Gaussian properties of Hull-White 1 factor model is:

$p(r(t) \leq x) = \Phi\left(\frac{x - \mathbb{E}(r(t))}{\sqrt{\text{Var}(r(t))}}\right)$. The probability of rates becoming negative therefore becomes:

$$p(r(t) \leq 0) = \Phi\left(-\frac{r(s)e^{-a(t-s)} + \alpha(t) - \alpha(s)e^{-a(t-s)}}{\sqrt{\frac{\alpha}{2a}(1 - e^{-2a(t-s)})}}\right)$$

The Hull and White model is a good model for the derivative pricing in both and positive and negative environnement. Its calibration is not fast and is often expensive to use hence its rare application on the market. For this study the shifted Black-Scholes model was used to price options under low or negative rates environnement. Even though choosing the shift parameter can be challenging, the model is handy and can be very well applied on today's market.

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Zakat Accounting Research for Upcoming Research Agenda: A Bibliometric Analysis

Moustapha Abakar MOUSSA ¹ Assoc.Prof. Recep YILMAZ ²

PhD student, Department of Accounting, Sakarya University, abakar_moustapha@yahoo.fr, ORCID: 0000-0002-3123-5625

Assoc.Prof., Department of Accounting, Sakarya University, rcyilmaz@gmail.com, ORCID: 0000-0002-0306-2958

ABSTRACT

This study aims to examine the current state of research on Zakat accounting and propose avenues for future research based on a systematic review of literature. Employing a qualitative approach and a bibliometric analysis methodology, we gathered 55 articles from Scopus-indexed journals. Subsequently, these articles were analyzed using VosViewer software to visualize the trajectory of Zakat accounting research worldwide. The findings of this study reveal that doktoralina, lubis, and zaid emerge as the most prolific authors in this domain. Furthermore, bibliometric analysis of keywords highlights four primary research domains: management and accounting of Zakat funds, awareness in Zakat accounting, Zakat financial reporting, and Zakat accounting. The most recurrent terms include Zakat institution, accountability, Islamic accounting, Zakat accounting, financial reporting, and technology. This study provides an overarching view of Zakat accounting research, pinpointing key authors, research themes, and fundamental concepts, thereby steering future investigations in this field.

Keywords: Zakat accounting, VosViewer, research map, bibliometric analysis.

Recherche en Comptabilité de la Zakat pour un Agenda de Recherche à venir : une Analyse Bibliométrique

RÉSUMÉ

Cette étude vise à examiner l'état actuel de la recherche sur la comptabilité de la zakat et à proposer des pistes de recherche pour l'avenir sur la base d'une revue systématique de la littérature. En utilisant une approche qualitative et une méthodologie d'analyse bibliométrique, nous avons rassemblé 55 articles provenant de revues indexées par Scopus. Ces articles ont ensuite été analysés à l'aide du logiciel VosViewer afin de visualiser la trajectoire de la recherche sur la comptabilité de la zakat dans le monde. Les résultats de cette étude révèlent que doktoralina, lubis et zaid sont les auteurs les plus prolifiques dans ce domaine. En outre, l'analyse bibliométrique des mots-clés met en évidence quatre domaines de recherche principaux : la gestion et la comptabilité des fonds de la zakat, la sensibilisation à la comptabilité de la zakat, l'information financière sur la zakat et la comptabilité de la zakat. Les termes les plus récurrents sont : institution de la zakat, responsabilité, comptabilité islamique, comptabilité de la zakat, information financière et technologie. Cette étude offre une vue d'ensemble de la recherche sur la comptabilité de la zakat, en identifiant les auteurs clés, les thèmes de recherche et les concepts fondamentaux, orientant ainsi les futures recherches dans ce domaine.

Mots clés: Comptabilité de la zakat, VosViewer, carte de recherche, analyse bibliométrique.

INTRODUCTION

Zakat, an integral aspect of Islamic faith, plays a pivotal financial role in invigorating a nation's economic progress, as emphasized by (Al-Bawwab, 2021; Alfaizin et al., 2018; Handoko et al., 2022). According to (Rusdianto, 2022), Zakat functions as a mechanism for pooling resources generated from consumption and investment, redirecting them toward productive assets that benefit both individuals and the community. Numerous scholarly works affirm Zakat's substantial contribution to community welfare, establishing enduring benefits like hospitals, universities, and research centers (Alshater et al., 2021; Herindar & Rusydiana, 2022; Rofiq et al., 2022). This illustrates the multifaceted nature of Zakat, including its instrumental role in funding education, fortifying educational systems, and creating opportunities for marginalized individuals (Razak et al., 2016). Additionally, the adaptable nature of Zakat regulations enables direct assistance to beneficiaries or through financial institutions, providing diverse social services and generating positive economic impacts on specific societal sectors (Hadijah & Shaleh Z, 2019; Shaikh et al., 2017).

Efficient management of Zakat assumes a pivotal role in nurturing sustainable development and advancing societal well-being, as underscored by (Hadijah & Shaleh Z, 2019; Latif, 2018; Rusdianto, 2022). Their study highlights the significance of Zakat governance in optimizing the system's effectiveness in delivering public goods and enhancing social welfare. Furthermore, ensuring adherence to best practices by Zakat boards significantly contributes to empowering Zakat (Ahmed, 2021; Kamaruddin & Hanefah, 2021; Spawi et al., 2022). Effective Zakat governance, as emphasized by (Riani & Ikhwan, 2022; Sawmar & Mohammed, 2021a), is crucial for sustainable development of Zakat resources, benefiting not just the Muslim community but society at large. Governance within Zakat institutions plays a crucial role in fostering transparency, efficient management, and resource allocation to realize socio-economic objectives (Ahmed, 2021; Almulhim et al., 2023; Kamaruddin & Hanefah, 2021; Spawi et al., 2022).

The emphasis on governance in Zakat must align with accountability within Zakat institutions. The connection between governance and accounting within Zakat institutions is vital for adept management and accountability, as emphasized by (Alshater et al., 2021; Ihsan & Ayedh, n.d.; Riani & Ikhwan, 2022). Accounting practices are purported to enhance transparency and accountability within Zakat institutions, contributing significantly to effective governance (Fahmi Ikhwandha & Hidayati, 2019; Mutmainah, 2016a). Therefore, it becomes imperative for Zakat institutions to strengthen their governance practices by transparently disclosing relevant information to the public (MIGDAD, 2019). The disclosure of information to the public is closely linked with accounting or reporting. Proper management and efficient accounting of Zakat are crucial for socio-economic development and addressing beneficiary challenges (Hadijah & Shaleh Z, 2019). Accounting for Zakat is believed to improve transparency and accountability within Zakat institutions, ensuring they fulfill their responsibilities to various stakeholders (Jaelani, 2016; Riani & Ikhwan, 2022). Furthermore, accounting represents a critical aspect of good governance and best practices within Zakat institutions, ensuring adherence to high management and governance standards (Ramli et al., 2015). (Jaelani, 2016) stress the pivotal role of accounting in preparing pertinent annual reports and accounts, crucial for the proper functioning and management of Zakat institutions. Along these lines, the term "Zakat accounting" has emerged, signifying the financial management and reporting practices of Zakat institutions in line with Islamic law, whether in religious, educational, or charitable contexts. Nevertheless, several issues arise concerning Zakat accounting, as highlighted in scholarly studies. One primary concern is the lack of accountability and transparency in preparing relevant annual reports and accounts, potentially leading to Zakat resource mismanagement (Jaelani, 2016). Additionally, the absence of universal accounting

standards for Zakat institutions results in diverse accounting practices and a lack of clear guidelines for these institutions (Jaelani, 2016; Riani & Ikhwan, 2022). This diversity hampers the uniformity of Zakat accounting practices, potentially compromising the quality of information (MIGDAD, 2019). Zakat, an influential Islamic practice, positively impacts society and the economy, supporting various developmental aspects like public goods, healthcare, and education. (Alam, 2022; Almulhim et al., 2023; Saad et al., 2014a) affirms its historical role in advancing social welfare and economic prosperity. The Zakat sector aids in wealth distribution, addresses socio-economic disparities, and embodies piety by promoting kindness, social justice, and comprehensive development.

Thus, prioritizing transparency and accountability within Zakat institutions becomes imperative. Public awareness of Zakat has expanded significantly, necessitating a thorough evaluation of Zakat accounting development through research. The use of bibliometric analysis, such as VosViewer's methodologies, proves beneficial in assessing research progress, exploring co-citation data, author and journal maps, or keyword co-occurrence maps (Donthu et al., 2021a; Kirby, 2023). (Ahmad et al., 2015; Widiastuti et al., 2021) discuss Zakat management from a legal perspective, revealing varied Zakat accounting practices among institutions. Effective accounting in Zakat institutions is crucial for fulfilling its public good objectives and maintaining integrity.

Other relevant research delves into factors influencing Zakat accounting, its benefits, and challenges (Ram et al., 2016; Saad et al., 2014a), institutional exploration of Zakat accounting (Rusdianto, 2022) accountability concepts in Zakat institutions (Noorbiah et al., 2023; Ram et al., 2016) and the evolution of Zakat accounting (Khalifah et al., 2022)

This research aims to expand upon existing studies, bridging research gaps and enriching Zakat accounting literature. It seeks to analyze global "Zakat Accounting" research in specialized journals, identifying prospects for future research and formulating a comprehensive research agenda.

RESEARCH METHOD

This study undertook a systematic review of scientific literature in the field of "Zakat Accounting" on an international scale. Data collection was conducted by scrutinizing articles referenced in the Scopus database using the key term "Zakat Accounting." Subsequently, a rigorous selection of articles and journals was made based on quality criteria, notably the presence of a DOI, to facilitate their analysis using software tools.

A total of 55 journal articles related to the research theme of "Zakat Accounting" were identified. The analysis of publication trends on this subject was conducted using VOSviewer software, which generates bibliometric maps for in-depth analysis. This software relies on the VOS (Visualizing Similarity) method to develop bibliometric visualizations that have been widely utilized in previous research for comprehensive analysis.

Moreover, VOSviewer was employed to create author maps and keyword maps based respectively on co-citation and co-occurrence data (Kirby, 2023; McAllister et al., 2022). This approach aims to analyze the maps of journals related to "Zakat Accounting," notably author maps and keywords. These data were then examined to identify future research directions through clusters present on the keyword map.

This research adopts a qualitative descriptive approach, coupled with a meta-analysis and descriptive statistical literature study based on 55 specific journal publications on "Zakat Accounting." Meta-analysis is a method used to synthesize prior research to evaluate the outcomes of existing studies. Furthermore, the qualitative method used is a constructive method, enabling the grouping of collected data into relevant and more accessible themes. Non-probabilistic purposive sampling was employed to gather information in accordance with the defined research objectives.

RESULT AND DISCUSSION

This study focuses on a bibliometric analysis of "Zakat Accounting" using articles from Scopus-indexed journals. Bibliometrics, a crucial method for evaluating scientific performance, encompasses various indicators such as citations, publications, patents, and other complex criteria (Donthu et al., 2021b; Rejeb et al., 2023). Its use allows for the assessment not only of research activities but also laboratories, researchers, and the scientific performance of nations and specific fields.

To delve deeper into the results of this metrological analysis, visual mapping is employed to graphically represent 55 journals associated with "Zakat Accounting". This mapping is based on the analysis of keywords and distinctive terms found within the articles of these journals. It aims to graphically visualize the elements of knowledge, patterns, dynamics, interrelations, and dependencies emerging from these scientific contents. The subsequent section will further detail these results by providing an in-depth explanation of this mapping of the network of 55 journals focused on the theme of "Zakat Accounting".

Bibliometric Mapping of Authors

Through the application of bibliometric analysis using VOSviewer software, a visual map of authors making contributions to the field of "Zakat Accounting" has been generated. The resulting image provides a visual representation of this mapping, where the larger and brighter yellow-marked points indicate a higher number of publications in journals related to the theme of "Zakat Accounting" authored by a specific individual.

Figure 1: Author map

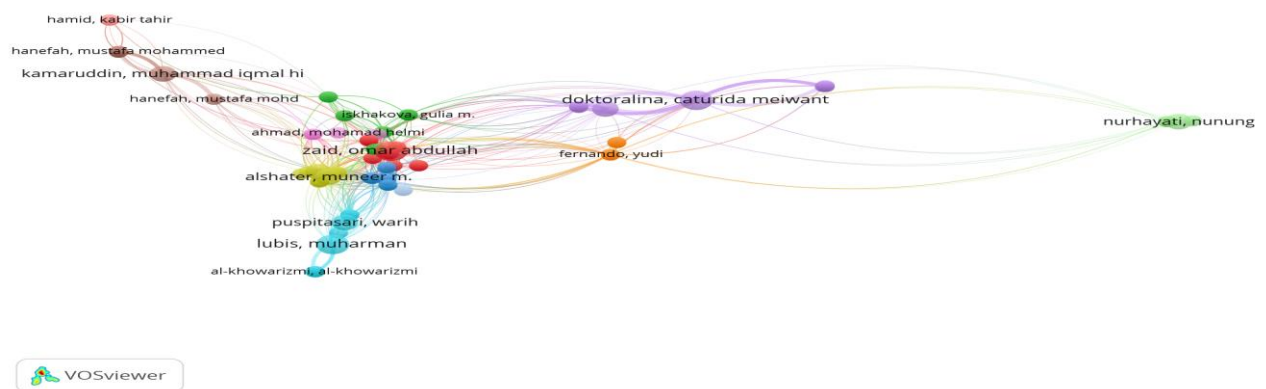
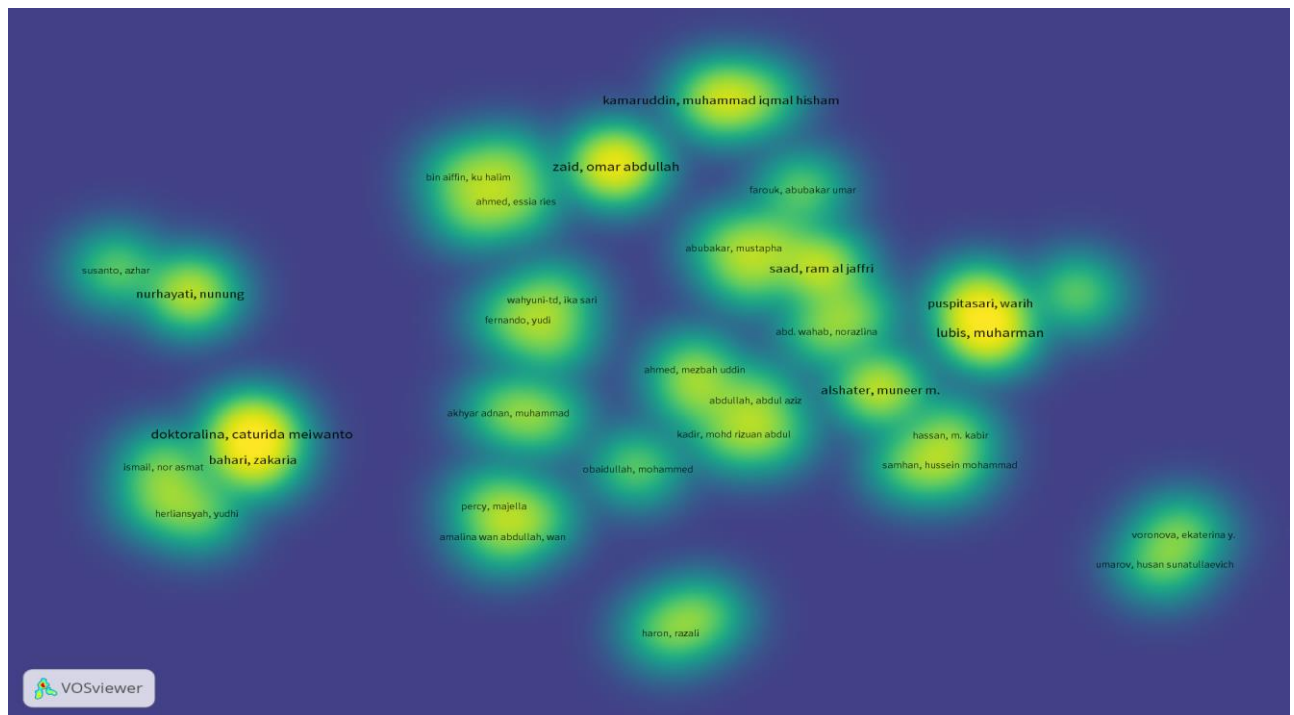


Figure 2: Author map

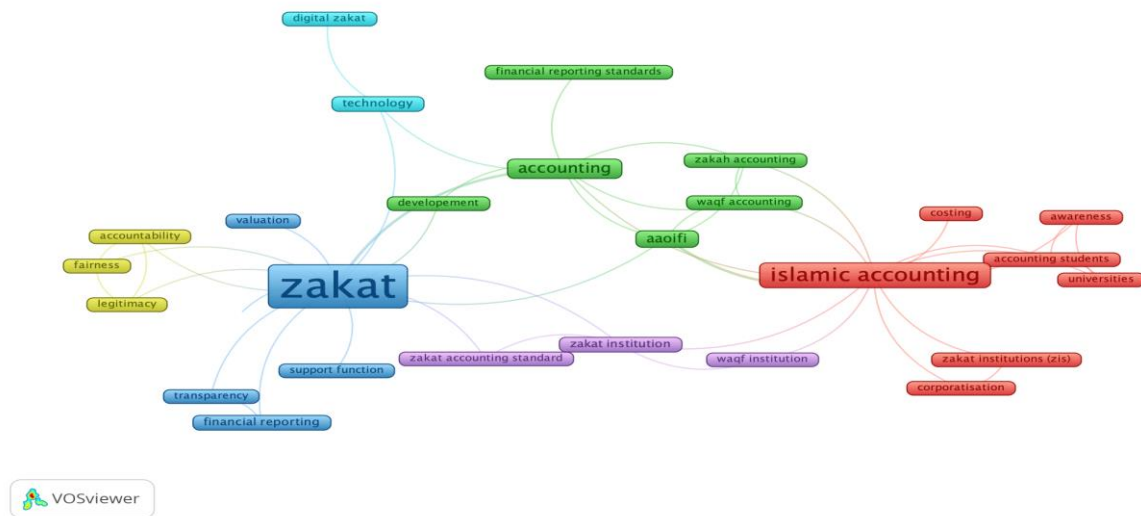
The presented figure demonstrates that the density of clusters on the bibliometric map correlates with the intensity of the displayed yellow color. The yellow shade on the map is influenced by the level of interconnectedness among elements. Therefore, this section holds key significance in understanding the overall structure of the bibliometric map, a pivotal aspect for analysis. Through this, it becomes feasible to identify authors with the highest publication counts.

In general, each author or researcher exhibits distinct characteristics within their published works. In some cases, an author may stand as a solitary contributor, while in others, collaboration with fellow authors or researchers influences cluster density. As a result, cluster densities vary. However, authors displaying significantly higher cluster densities indicate a more substantial volume of research publications on the topic of "Zakat Accounting" compared to those with lower cluster densities. Consequently, these findings could serve as a benchmark for future researchers.

Based on the analysis results, it was observed that authors doktorlina, zaid, and lubis were the most productive contributors in terms of publications related to "Zakat Accounting".

Visual Mapping of Keywords

The following figure illustrates the frequency of keywords used in research within the field of "Zakat Accounting." The most prominent shape represents the most frequently utilized term in journal articles concerning "Zakat Accounting."

Figure 3: Research cluster

In the context of mapping, the most found keywords in "Zakat Accounting" publications consist of terms such as Zakat institution, accountability, Islamic accounting, Zakat accounting, financial reporting, and technology. These keywords are subsequently categorized into six clusters for analysis and representation purposes.

Table 1: Research Cluster

Cluster	Keywords
Cluster 1 (7 items)	accounting students, awareness, corporatisation costing islamic accounting, universities, zakat institutions (zis)
Cluster 2 (6 items)	Aaoifi, accounting development, financial reporting statandards, waqf accounting and zakah accounting
Cluster 3 (6 items)	Financial reporting, support, function, transparency valuation, zakat, zakat calculation
Cluster 4 (3 items)	Accountability, fairness, legitimacy
Cluster 5 (3 items)	waqf institution, zakat accounting standards, zakat institution
Cluster 6 (2 items)	Digital zakat, technology

Research mapping can be established based on 6 keyword clusters, namely:

Cluster 1: Awareness and Education in Zakat Accounting

Zakat accounting remains a field that has not undergone extensive academic research. Nevertheless, some studies address aspects related to awareness and education concerning Zakat, which are pivotal factors influencing Muslims' participation and compliance with this religious duty. (Kibiya et al., 2023)'s study aimed to assess the comprehension and familiarity of accounting students in Nigerian universities regarding Islamic accounting, while also comparing their knowledge level in Islamic accounting to conventional accounting. The findings revealed that accounting students possess a basic understanding and adequate awareness of Islamic accounting, allowing them to distinguish this approach from conventional accounting. Furthermore, they express a clear interest in learning Islamic accounting and support its mandatory inclusion in the accounting curriculum. However, the research has limitations, notably its focus on the northwest region of Nigeria, which may limit the generalization of results nationwide. Additionally, solely using a questionnaire might restrict a comprehensive understanding of participants' knowledge and awareness. The lack of balanced representation of non-Muslims among respondents is also noteworthy. Despite these limitations, the study holds significant importance by providing insights into accounting students' understanding and knowledge levels. It underscores the importance of integrating Islamic accounting into educational and professional programs. Based on these conclusions, recommendations are proposed for Nigerian educational institutions and professional bodies to enhance awareness and knowledge in Islamic accounting. These recommendations include incorporating specific subjects such as Islamic accounting and finance, accounting for Islamic financial institutions, zakat accounting, shariah audit, shariah corporate governance, education, and ethics at various academic levels.

For instance, (Al Mubarak et al., 2021; Alsharari, 2019) evaluated how accounting education impacted individuals' compliance behavior towards Zakat, highlighting the significance of awareness and training in fostering participation. However, these studies might have limitations in terms of generalizing results as they rely on samples specific to certain regions or cultures. Lastly, (Mohammed Sarea & Mohd Hanefah, 2013) focused on the necessity of accounting standards for Islamic financial institutions, referencing the AAOIFI (Accounting and Auditing Organization for Islamic Financial Institutions). Their study aimed to comprehend how the adoption of these standards could influence the accounting practices of Islamic financial institutions. Nonetheless, their findings might be limited to a specific context and might not apply universally to all Islamic financial institutions.

Cluster 2: the evolution of accounting standards governing zakat.

Cluster 2 delves into the evolution of accounting standards governing zakat, particularly those devised by the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI). This cluster investigates the factors impacting Islamic banks' adherence to these standards and delves into the practical and theoretical challenges associated with their implementation. Notably, researchers such as (Elhalaby et al., 2023; ERSOY & SÜNER, 2019; Haitam et al., 2022) conducted empirical studies on institutional pressures influencing the uptake of AAOIFI standards. Their findings underscored the considerable influence of these pressures on ensuring compliance with accounting standards. However, their studies also highlighted impediments faced by Islamic banks, including deficiencies in human resources, information systems, and regulatory backing. Nevertheless, these studies may have limitations in their applicability due to their focus on specific countries and a potential oversight of regional or institutional variations.

Another pertinent study in this domain was conducted by (Agbodjo & Toumi, 2021; Mohd Zain et al., 2021), examining how the adoption of AAOIFI standards affects the quality of financial information in Kuwaiti Islamic banks. Their methodology involved multiple regression analysis to test the hypothesis that embracing AAOIFI standards enhances financial information quality in these banks. The outcomes

revealed a substantial and positive correlation between the adoption of AAOIFI standards and the quality of financial information, encompassing relevance, reliability, comparability, and verifiability. This research holds promise in contributing significantly to the discourse on zakat accounting standards by providing empirical substantiation of the advantages stemming from AAOIFI standards adoption within Islamic banks, especially within a context distinct from Malaysia.

(Sulaiman & Zakari, 2005) proposed a normative strategy for shaping Islamic corporate reports, drawing on the Hofstede-Gray framework as a foundational theoretical underpinning. Their study aimed to justify the necessity of extending Islamic corporate reporting beyond traditional standards, incorporating the cultural and religious values of Muslim communities. Nonetheless, the broader applicability and validity of their approach might be subject to scrutiny due to its reliance on a framework that may not universally apply across diverse cultural or institutional contexts.

Cluster 3: challenges and transparency in zakat reporting

The research cluster presented here focuses on the intricate landscape surrounding transparency in Zakat reporting, shedding light on the challenges, shortcomings, and potential avenues for improvement within the institutions tasked with managing Zakat. These studies offer critical insights into the current deficiencies while proposing plausible solutions to augment transparency and accountability in Zakat reporting.

(Ahmad et al., 2015; Sawmar & Mohammed, 2021b) conducted an in-depth exploration into the transparency levels of Zakat reporting within pertinent institutions. Their findings revealed a multitude of obstacles, including the absence of standardized norms, insufficient awareness among administrators, communication limitations, and a reluctance to share information. These studies highlighted pivotal elements such as leadership, organizational culture, political will, and personnel qualifications as imperative for addressing these challenges and advancing reporting practices.

(Friantoro & Zaki, 2019) study, examining the impact of the digital era on amil zakat institutions in Indonesia, underscored the opportunities and challenges stemming from technological advancements. It emphasized the necessity of bolstering the skills of amil zakat to effectively harness technological progress for Zakat promotion, collection, and reporting, while also mitigating potential risks.

(Mohammed Sarea & Mohd Hanefah, 2013) analysis of Zakat information disclosure in Bahraini companies' annual reports, aligned with AAOIFI standards, uncovered insufficient adherence to established norms. Factors such as company size, industry sector, profitability, and foreign ownership were identified as influential, although the study acknowledged limitations due to the limited scope of companies analyzed.

(Mutmainah, 2016b) research investigating the impact of perception regarding accountability, transparency, and responsibility of zakat institutions on the intention to pay zakat in Indonesia unveiled noteworthy findings. Through comprehensive field research and statistical analysis, it highlighted the positive and significant influence of accountability and transparency on the intention to pay zakat, while noting no significant influence regarding responsibility.

These studies collectively highlight deficiencies in Zakat reporting practices and provide valuable insights for enhancement. They stress the importance of establishing standardized norms, improving competencies, raising awareness, and leveraging technological advancements to bolster transparency and accountability within Zakat institutions.

Cluster 4 and 5 Asset management and zakat accounting

This cluster represents the asset management of zakat institutions and zakat accounting, which are essential aspects to ensure the transparency and accountability of zakat institutions.

(Rejeb et al., 2023) study on optimizing zakat revenue generation underscores three crucial factors: the environment, resources, and historical context. Despite its insights, relying solely on Scopus as a data source may create bias by overlooking diverse literature in the metaverse domain. Expanding data sources beyond Scopus to include practitioner-focused materials, reports, and specialized research could yield a more comprehensive perspective. Additionally, the study's sample size of 595 articles might not fully represent the breadth of metaverse research, potentially limiting its depth of analysis. Integrating qualitative studies could complement the quantitative approach, offering a more nuanced understanding of the evolving metaverse landscape.

The study conducted by (Fahlefi et al., n.d.) focused on the critical activities of zakat agencies—collection and distribution. It aimed to depict the management steps involved in zakat collection and distribution by the National Zakat Agency in the regency/city of West Sumatra province, Indonesia. Using a qualitative research approach and a case study method involving unstructured interviews, observations, and documentation review, the research identified that the agency employed the POSCAC stages—Planning, Organizing, Staffing, Coordinating, Activating, and Controlling—as a management model. However, this study bears certain limitations. While insightful, the methodological approach could benefit from a deeper analysis of specific challenges faced by the Zakat Agency and a more detailed assessment of the actual effectiveness of applying the POSCAC model in these specific contexts.

(Fitriyani et al., 2023), This research delves into the application of PSAK 109 accounting standards for Zakat, Infaq, and Sadaqah at LAZ Yatim Mandiri in Ponorogo. Employing qualitative-descriptive methods like observation, documentation, and interviews, the study examines compliance with PSAK 109 in financial statement presentation. The findings underscore adherence in financial statement presentation but highlight a lack of compliance in disclosure variables for ZIS fund management due to the absence of detailed CaLK (CaLK - Cash and Liquidity Calculation). Encouraging adherence to PSAK 109 in accounting for Zakat institutions, the study aims to promote growth for LAZ Yatim Mandiri Ponorogo and similar organizations.

(Owoyemi, 2020) This study addresses the crisis of confidence revolving around Zakat management by state and zakat agencies, affecting the trust relationship between payers and collectors of zakat, as stipulated in the Quran. It investigates the permissibility of directly giving zakat to beneficiaries amid contrasting opinions suggesting it might be sinful. Through analyzing scholars' viewpoints, the research reveals divided perspectives on directing zakat to the state or beneficiaries. The study concludes that while the ideal practice advocates channeling zakat through the state or zakat agencies, it clarifies that there is no sin in directly giving zakat to beneficiaries, particularly in light of trust issues with these agencies. Utilizing historical, analytical, and critical tools, the study, primarily library-based in nature, validates this alternative approach. Despite focusing on debunking the notion that giving zakat directly to recipients is sinful, especially amidst trust concerns in zakat agencies, it signals the need for further comprehensive research into this multifaceted issue.

(Islam & Salma, 2020), Zakat plays a significant role in the socio-economic development of Muslim communities, mandated as a compulsory contribution from specific individuals, directing a fixed portion of their wealth toward al-mustahuqqun beneficiaries. Its fundamental objective revolves around achieving social and economic justice, as underscored in various Quranic references. However, in Bangladesh, the absence of a comprehensive zakat institution, except for the Center for Zakat Management (CZM), has led to challenges in the structured collection and distribution of zakat. In contrast, Malaysia has emerged as a leading hub for Islamic financial institutions, excelling not only in Islamic banking but also in efficient zakat management. This study aims to analyze zakat collection and distribution practices in Bangladesh, drawing insights from the CZM model and Malaysia's successful zakat administration. Its goal is to explore potential strategies and derive lessons that Bangladesh could adopt from Malaysia's proficient handling of zakat.

(Saad et al., 2014b), this paper's primary objective is to delve into the concept of Islamic accountability in managing zakat funds. Through a theoretical and conceptual approach, it seeks to offer a comprehensive understanding of the accountability system and the practices adopted by zakat institutions. Identifying factors contributing to inefficiencies in zakat distribution is a key aspect of this exploration. The presented Islamic accountability framework represents an initial endeavor to comprehend and evaluate the effectiveness of accountability practices specifically within the context of managing zakat funds.

(Hidayati & Tohirin, 2019), this study aims to devise a performance assessment framework tailored specifically for zakat institutions, integrating perspectives from Maqasid Sharia and Sharia enterprise theory. Drawing on prior research on performance evaluation within zakat institutions and leveraging concepts articulated by Al Ghazali and Ibn Ashur, the paper advocates for adapting performance evaluation methodologies utilized in Islamic banking to suit the context of zakat institutions. It concludes by emphasizing that implementing a performance scorecard grounded in Maqasid Sharia and Sharia enterprise theory enables a comprehensive evaluation of zakat institutions' performance, thereby facilitating the computation of a Zakat Management Index.

(Fadilah et al., 2023), this study critically examines the performance of zakat, particularly focusing on the role of the fund utilization program as an intermediary in zakat administration. It specifically investigates the efficacy of the zakat distribution program, analyzing programs conducted by BAZNAS in West Java through a case study and a descriptive approach. The outcomes aim to propose innovations that could assist managers of zakat institutions in evaluating the performance of fund utilization, placing particular emphasis on enhancing the efficiency of the distribution program. The West Java BAZNAS distribution program encompasses various sectors like the economy, healthcare, education, including da'wah initiatives, and support for victims of natural calamities. Nevertheless, certain challenges occasionally impede the effectiveness of this program, leading to the implementation of diverse measures, including the adoption of Standard Operating Procedures (SOP), to evaluate its efficiency as a zakat distributor.

(Nomran & Haron, 2022), this article explores the feasibility of employing zakat as an alternative indicator for assessing the performance of Islamic banks. Findings suggest that zakat ratios serve as valid indicators, complementing traditional performance metrics and functioning independently to evaluate the Islamic performance of banks. However, the study's limitation lies in its failure to account for variations in results over time, thereby representing a constraint within this research.

Cluster 6: Technological innovations for the management and calculation of zakat

The sixth cluster focuses on technological innovations for the management and calculation of zakat. The management and computation of zakat significantly benefit from technological advancements, bringing efficiency and transparency to zakat institutions. As one of Islam's pillars aimed at reducing poverty and promoting social justice, zakat leverages information and communication technologies (ICT) to facilitate collection, distribution, and reporting.

A study conducted by (Hassan & Muneeza, 2023) delves into utilizing technology to simplify zakat distribution among the needy. Their aim is to address challenges related to beneficiary identification and the transparency of fund distribution. The researchers advocate innovative solutions, including the Internet of Things (IoT), to enhance this process. They strongly advocate increased integration of technology in zakat management operations for a more transparent and efficient distribution of funds to the needy.

In another study, Nailah & Rusydiana (2020) mapped out the development and trends in research on zakat and technology within Islamic economics and finance based on over 440 indexed publications.

Their analysis highlights a significant growth in publications in this field, showcasing the burgeoning research on zakat and technology.

(Chuttur, 2023) 's study highlights that despite the presence of zakat organizations in Mauritius, poverty persists among the local Muslim population. This research underscores the underutilization of technology by these organizations and the operational challenges in managing zakat funds. Technological recommendations are outlined to enhance the efficiency of these organizations in their mission to aid those in need.

Lastly, (Beik et al., 2021) underscore the crucial importance of digital technology in zakat management to alleviate poverty. Their study analyzes how Indonesia's National Zakat Council (BAZNAS) utilizes technological tools such as websites, mobile applications, and rice vending machines to efficiently collect and distribute zakat.

These research endeavors underscore the pivotal significance of technological advancements in optimizing zakat management and distribution. They identify challenges and propose innovative solutions to enhance the effectiveness of zakat institutions in their humanitarian mission.

CONCLUSION

This article presents a comprehensive analysis of global research on "Zakat Accounting." It is based on a systematic literature review that identified 55 articles from Scopus-indexed journals, all focused on this subject. Among the most prominent researchers in this field, doktoralina, lubis, and zaid stand out as influential and prolific authors.

Building upon a thorough analysis of keywords, the study categorized research on "Zakat Accounting" into six distinct thematic clusters. The most frequently used terms include waqf institution, responsibility, Islamic accounting, waqf accounting, reporting, and technology. These keywords reflect the primary areas of this research, covering various aspects such as awareness and education in Zakat Accounting, adaptation of accounting standards for Zakat, challenges related to transparency in Zakat reporting, asset management, and Zakat accounting, as well as technological advancements for Zakat collection and computation.

For future studies, the use of tools such as Biblioshiny-R is crucial for conducting in-depth and visually instructive analyses. These tools offer the opportunity to enhance understanding and exploration of this specific domain (Daskalopoulou et al., 2023; Lina Marlina et al., 2023; Nuraini & Thuba Jazil, 2023).

Furthermore, platforms like CiteSpace, Dimensions Analytics, and SciVal, along with the utilization of programming languages such as Python/R with specialized libraries, serve as additional resources for conducting comprehensive bibliometric analyses. These tools enable the exploration of emerging trends, visualization of interconnections among publications, assessment of research performance, and mapping of collaborations within the realm of "Zakat Accounting".

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Acheminement des Marchandises et la Reduction des Impacts Environnementaux dans le Cadre de la Logistique Urbaine

Fatima Alioune BA

Étudiante en Licence., Faculté des Sciences Juridiques Economiques et Sociale,
Université Ibn Tofail, fatimabaaa82@gmail.com, ORCID: 0009-0008-4929-6531

RÉSUMÉ

La logistique urbaine est un sujet d'actualité dont de multiples acteurs se préoccupent. Le milieu urbain subit de nombreuses évolutions et il est donc devenu essentiel de prendre en considération ces changements. L'espace urbain a une importance primordiale puisque la logistique s'adapte aux ressources présentes et dépend des acteurs qui la constituent. Ce sont les évolutions des villes, des modes de consommation et les avancées technologiques qui incitent à faire de nouvelles études sur le sujet. Garante de la vitalité et de l'attractivité économique d'un territoire, la logistique urbaine est un anneau de la chaîne essentielle du système urbain. Il est question d'un secteur dynamique et en totale transformation, qui doit se restructurer afin d'essayer de répondre à de nouveaux enjeux. En raison de nombreuses intégrations, spécialement environnementaux, sanitaires, moins chères et sociaux, les administrations territoriales et l'Etat prennent maintenant conscience du vrai intérêt à se poser des questions de logistique urbaine. Les enjeux liés à la logistique urbaine sont bien identifiés par les collectivités mais la multiplicité des acteurs, la superposition des compétences et l'évolution permanente de la Supply Chain en font un sujet complexe à traiter.

Mots clés : Logistique urbaine, Supply Chain, Transports, Environnement.

Goods Routing and Reduction of Environmental Impacts in Urban Logistics

ABSTRACT

Urban logistics is a current topic of concern for many stakeholders. The urban environment is undergoing numerous changes, making it essential to consider these transformations. Urban space is of paramount importance since logistics adapt to the available resources and depend on the actors involved. It is the evolution of cities, consumption patterns, and technological advancements that prompt new studies on the subject. As a guarantor of a territory's vitality and economic attractiveness, urban logistics is a crucial link in the urban system chain. This is a dynamic sector in total transformation, which must restructure to address new challenges. Due to numerous integrations, especially environmental, health, cost-effective, and social factors, local administrations and the state are now aware of the true interest in addressing urban logistics issues. The challenges related to urban logistics are well identified by local authorities, but the multiplicity of actors, the overlapping of competencies, and the continuous evolution of the Supply Chain make it a complex subject to handle.

Keywords: Urban logistics, Supply Chain, Transportation, Environment.

INTRODUCTION

De nos jours la Supply Chain est vue comme étant la gestion des différents flux au sein d'une organisation. Il s'agit là des flux physiques (déplacements, stockages de marchandises), des flux d'informations (caractéristiques des produits, informations fournisseurs, stratégies d'approvisionnements, prestataires logistiques, indicateurs de performances...) et des flux financiers (tout ce qui concerne la gestion des coûts). Son défi est de rendre accessible ses offres au moment adéquat, à la bonne destination et avec un coût abordable. Pour atteindre de tels objectifs et ainsi satisfaire la clientèle, il faut une optimisation des flux urbains car c'est dans le milieu urbain que tous les mouvements prennent forme.

La logistique urbaine quant à elle, correspond à l'acheminement le mieux adapté des flux de marchandises à destination ou n provenance de la ville. Elle comprend les flux d'approvisionnement des particuliers, les flux annexes tels que les transports de déchets, les transports publics. La ville reste le lieu majeur d'échanges et de consommation surtout avec le développement actuel du e-commerce. On observe une demande de plus en plus forte de livraisons à domicile liée au vieillissement de la population, à la diminution du taux de motorisation en centre-ville et à une valeur du temps en croissance.

Nous remarquons qu'en 2011, la population mondiale a franchi la barre des 7 milliards d'individus. Et la moitié de ceux-ci vivaient dans les villes, une première dans l'histoire de l'humanité. La tendance ne va pas s'inverser de sitôt puisque les Nations Unies estimaient qu'en 2030, nous frôlerons les 5 milliards d'urbains (sur 8,3 milliards de terriens). C'est donc près de 1,5 milliards d'humains supplémentaires qu'il va falloir loger en ville d'ici deux décennies. Un pari gigantesque auquel se sont intéressés des géographes et environnementalistes dans une étude publiée le 17 septembre par les Proceedings of the National Academy of Sciences (PNAS).¹

Il devient donc primordial de prendre en compte l'évolution de l'espace urbain et d'y adapter une logistique. En effet, la logistique doit permettre une optimisation en termes de coûts, délais et conséquences sur le milieu environnemental et les individus qui s'y trouvent. Il est alors nécessaire de trouver des solutions durables pour tous. La Supply Chain joue énormément au niveau de la viabilité des transports de marchandises dans les secteurs urbains.

Le progrès de l'urbanisation a aussi bien des avantages que des inconvénients sur l'environnement. Des politiques et des mesures ont été imposées pour éviter un nombre important de nuisances. Cet article sera axé uniquement sur les moyens de transport de marchandises en logistique urbaine, l'aspect infrastructurel de la ville ne sera donc pas abordé. Un nombre important d'organisations veillent à ce que la logistique aide à l'optimisation des moyens de transports pour occasionner un minimum d'impacts négatifs. La problématique découlant de cette réflexion est la suivante :

Dans le cadre de la logistique urbaine, comment peut-on mieux acheminer les marchandises tout en réduisant leur impact environnemental ?

Les deux grands thèmes de cet article à savoir les transports et l'environnement dans le cadre de la logistique urbaine sont repris par deux sous-questions :

- Comment procéder à une amélioration de l'utilisation des moyens de transport de marchandises dans l'espace urbain ?

¹ https://www.lemonde.fr/passeurdessciences/article/2012/09/23/entre-2000-et-2030-l-espace-urbain-mondial-aura-triple_5986279_5470970.html

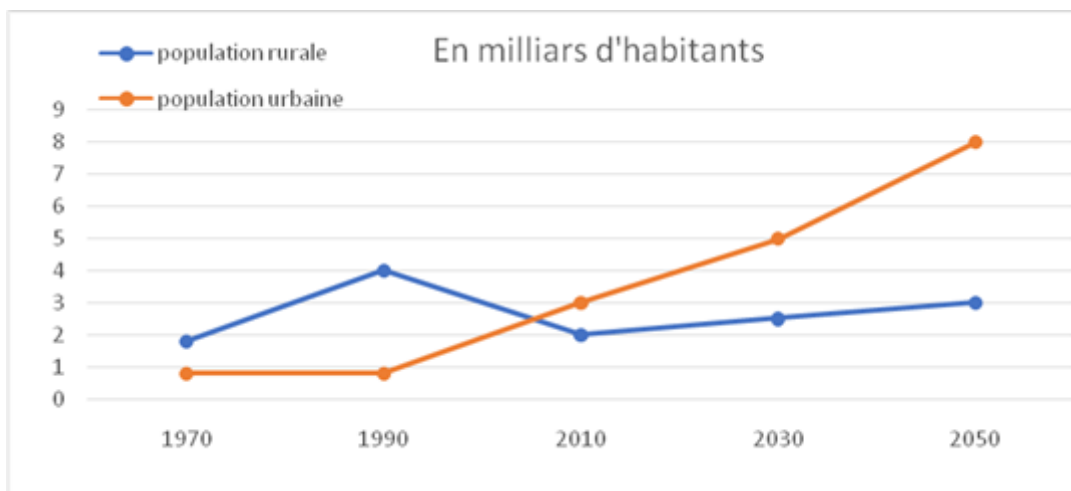
- Quels sont les moyens permettant un transport de marchandises durable ?

CONTEXTE THEORIQUE DE LA LOGISTIQUE URBAINE

L'évolution du milieu urbain entraîne d'énormes changements dans la vie des êtres humains. Leurs habitudes, leurs fréquentations, l'environnement dans lequel ils se trouvent changent.

On constate de plus en plus de déplacements des paysans vers les villes à cause d'énormes difficultés auxquelles ils font face, comparé aux citadins. Famine ou malnutrition (Inde) ; manque d'argent, manque de services de base (santé). Certains ont dû fuir à cause de la guerre (Rwanda), d'autres rêvaient de situations de vies meilleures tout simplement. Les villes de nos jours sont alors bondées.

Figure 1: Population urbaine et rurale dans le monde



Source: Lelivrescolaire.fr Doc.1

Cette étude montre des rythmes de croissance sont très élevés. Depuis un siècle, la population urbaine a augmenté dix fois plus vite que la population totale. On parle d'explosion urbaine pour désigner cette très forte croissance. D'ici quelques années la majorité des Hommes vivra en ville (45% actuellement).

Le nombre de très grandes villes se multiplie. On en comptait en 1950 deux de plus de 10 millions d'habitants (New York et Londres), contre 17 aujourd'hui. De même, le nombre des villes de plus de 5 millions d'habitants a quintuplé depuis 1950. Ainsi, ce sont avant tout de très grandes villes qui attirent les hommes.²

Les 10 plus grandes agglomérations du monde :

- 1- Tokyo (Japon) 27 millions d'habitants
- 2- Mexico (Mexique) 20 millions d'habitants
- 3- Sao Paulo (Brésil) 20 millions d'habitants
- 4- New York (Etats-Unis)
- 5- Bombay (Inde)
- 6- Rio de Janeiro (Brésil)

² <http://keepschool.com/fiches-de-cours/collège/geographie/urbanisation-dans-monde.html>

7- Calcutta (Inde)

8- Séoul (Corée du Sud)

9- Djakarta (Indonésie)

10- Shangai (Chine)

Elles sont d'abord apparues dans les pays développés (Londres, New York), en raison de l'industrialisation. Aujourd'hui, c'est dans le tiers monde qu'elles se développent le plus : 17 des 20 plus grandes villes du monde y sont situées. Mexico en constitue un exemple célèbre.

Les mégapoles du tiers monde connaissent de très nombreux et graves problèmes : approvisionnement en eau, transports insuffisants, pénurie de logements, insécurité, entassement, pauvreté et pollution.

Les transactions et plus précisément le nombre de visiteurs augmentent avec le changement de poste des secteurs urbains, l'allongement des temps de parcours et mouvements. Pendant des siècles, il y'a eu des progrès notables des tendances de consommation, aux grandes boutiques se sont ajouté les ventes par correspondance. Les gens économisent énormément de temps désormais en effectuant leurs achats en ligne. Le cas de la France nous interpelle:

La France est en effet le 2^{ème} marche en Europe et le 5^{ème} au niveau mondial. Comme annonce par la FEVAD il y'a un an, le cap des 100 milliards a bien été franchi cette année. Au total, les Français ont dépensé 103,4 milliards d'euros sur internet l'an dernier. On rappellera que ce montant comprend à la fois les ventes de services (voyage, transport, streaming, téléphonie...) et celles de produits, ces dernières comptant pour 45% du total. Malgré le fléchissement de la croissance observe au dernier trimestre, la hausse du chiffre d'affaires atteint donc +11,6%.

Pour 2020, la FEVAD anticipe un niveau de croissance comparable à celui de 2019, de l'ordre de 11,5%. Les sites de e-commerce devraient donc, cette année réaliser un chiffre d'affaires de 115 milliards d'euros avec un nouveau cap historique en vue. Cette fois en nombre de commandes, avec près de 2 milliards de transactions attendues en 2020.

Tableau 1: Nombre de sites de e-commerce actifs en France de 2009 à 2018 (en milliers)

Anées	En milliers	Années	En milliers
2018	182	2012	117,5
2017	173	2011	100,4
2016	157,3	2010	81,9
2015	182	2009	64,1

Source: fr.statista.com

Depuis plus de 15 ans, en France mais aussi à l'étranger, plusieurs initiatives et projets de logistiques urbaines ont été lancés pour réduire les externalités négatives du TMV(Transport de Marchandises en Villes) : réglementation du trafic et du stationnement, création et organisation des aires de livraison, piétonisation de certains cœurs de ville, mise en place de zones de trafic limité et de zones de faibles émissions, mise en place d'un péage urbain...Nés d'initiatives publiques ou privées, plusieurs Centres de Distribution Urbaine(CDU) ont également vu le jour. Certains ont cessé de fonctionner suite à des problématiques financières. Dans la quête d'une logistique urbaine durable la dimension économique reste primordiale.

MÉTHODOLOGIE DE L'ÉTUDE

L'ensemble des acteurs de la logistique urbaine ont des objectifs en commun. Cette étude mettra en avant les différents objectifs que ces acteurs visent afin d'assurer une logistique urbaine durable. Avec l'évolution de la logistique urbaine, de nouvelles initiatives voient le jour et ainsi nous étudierons les différents secteurs que cette évolution concerne :

Les tendances récentes

On observe une demande de plus en plus forte de livraisons à domicile et de l'e-commerce pour les biens de consommation courante. Cette tendance est notamment liée au vieillissement de la population, à la diminution du taux de motorisation en centre-ville, à un intérêt pour l'achat ludique ou une valeur du temps en augmentation.³

*Quelles sont les pratiques des transporteurs et des logisticiens ?

La livraison du « dernier km » est la plus coûteuse (20 % du coût total de la chaîne) et les transporteurs sont de plus en plus réticents à livrer les centres-villes. La rareté des friches urbaines et le coût du foncier entraînent un éloignement des espaces logistiques. Les nouvelles solutions technologiques pour la gestion des flottes, l'optimisation des tournées ou le suivi des livraisons connaissent un succès alors que d'autres pistes d'amélioration de l'empreinte écologique comme la mutualisation des moyens ou le report vers des modes non routiers se heurtent à des obstacles psychologiques, culturels ou techniques.⁴

*Quelles sont les pratiques du commerce et de la distribution ?

En application du code du commerce, les livraisons ne peuvent avoir lieu qu'en présence du destinataire, ce qui limite les possibilités de livraison à des horaires atypiques (nuit). Les commerçants arbitrent l'utilisation de leurs surfaces au bénéfice de la vente, et optent souvent pour la franchise ce qui leur fait perdre la maîtrise des approvisionnements. Le petit commerce indépendant se raréfie et les hypermarchés de périphérie sont moins attractifs. La grande distribution réinvestit donc les centres-villes avec de petites surfaces ouvertes presque 24 h/24 tout en développant en parallèle le commerce électronique.

Les pratiques d'achats

Des enquêtes décennales sur les déplacements de personnes donnent des indications sur les comportements d'achats des ménages. De nombreux déplacements d'achat sont effectués entre 55 et 60 % en voiture, 30 à 35 % à pied et de 5 à 10 % en transport en commun, le reste en deux-roues. Nombreux se font à vide. Les achats en hypermarché se font en voiture à plus de 80 %, quelles que soient la densité urbaine de la zone et la distance à parcourir. Pour 15 € d'achats alimentaires dans un hypermarché en périphérie, la consommation moyenne d'énergie est deux fois celle dans un supermarché de quartier.⁵

*Quels sont les leviers mis en place pour la logistique urbaine ?

La fonction transport-logistique est encore assez méconnue. Si les commandes peuvent être dématérialisées, les biens commandés eux, doivent et devront toujours être livrés physiquement : le

³ Qu'est-ce que la logistique Urbaine ?

<http://www.rungisinternational.com/fr/bleu/enquetesrungisactu/logistiqueurbaine652.asp/>

⁴ Etats des lieux, tendances et actualités de la logistique urbaine

http://www.developpement-durable.gouv.fr/IMG/pdf/DGITM_Logistique_urbaine_8p_web.pdf

⁵ Quelles sont les pratiques des transporteurs et des logisticiens ?

http://www.developpement-durable.gouv.fr/IMG/pdf/DGITM_Logistique_urbaine_8p_web.pdf

système logistique urbain est donc contraint. Ces constats doivent conduire à retenir des solutions qui s'appuient sur 5 variables stratégiques : la mutualisation, les véhicules, le foncier logistique, l'accueil des véhicules de livraison et la structure commerciale. En les combinant, des scénarios vertueux pour la logistique urbaine du futur peuvent être imaginés.

* Quelles sont les enjeux de la logistique urbaine ?

Ils sont nombreux:⁶

- Agir sur la structure du marché en favorisant l'émergence de nouveaux acteurs, notamment celui d'« ensemblier de la logistique urbaine ». Ces acteurs contribueront à mutualiser les moyens et développer des synergies afin de réduire les coûts d'exploitation du « dernier kilomètre » et l'empreinte écologique. En parallèle, le développement des sociétés de services de livraison et d'accompagnement à domicile par la professionnalisation contrôlée de ces nouveaux métiers.
- Faire de la logistique urbaine un tremplin pour l'emploi. Permettant d'une part, à ce secteur de drainer des ressources humaines et, d'autre part, offrant à des publics en difficulté une voie d'insertion professionnelle et sociale. La logistique urbaine ne bénéficie pas d'une bonne image. Cependant, elle porte en elle une véritable expertise qui combine des connaissances très riches avec un savoir-faire irremplaçable sous la pression du temps réel. Le développement des livraisons à domicile tend à élargir le champ traditionnel de la logistique urbaine avec le développement du e-commerce. Dès lors, il paraît essentiel de renforcer et soutenir les filières de formation qui offrent dans ce domaine un éventail de métiers allant du très qualifié au faiblement qualifié.
- Favoriser un horizon juridique adapté. Également favoriser le développement d'une logistique urbaine s'inscrivant dans une perspective de développement durable. Il conviendrait de favoriser la cohérence des arrêtés municipaux en étendant les compétences des autorités organisatrices de transport. La professionnalisation des aires de livraison et l'introduction de normes d'émission et de bruit pourraient constituer des outils positifs de régulation du système urbain. Le contrôle de l'inscription au registre des transporteurs constitue un moyen possible de réduire les comportements non vertueux. Une autre piste de progrès est constituée par les réflexions à mener (code du commerce) afin de faciliter les livraisons en dehors de la présence du destinataire dans des sas ou points relais ou de nuit.
- Faire du foncier le levier de la réintroduction de la logistique dans la ville. Il convient donc de démontrer l'utilité de la fonction logistique et développer des synergies avec les politiques commerciales et l'urbanisme. Le maintien d'un tissu dense de commerces de proximité constitue un élément essentiel pour la vitalité économique et la qualité de vie dans les zones urbaines. Dès lors, l'utilisation des dispositions du droit de l'urbanisme, notamment le droit de préemption, pourrait faciliter le maintien de commerces de proximité et, parallèlement, faciliter la livraison et l'enlèvement des marchandises. Des espaces délaissés situés à proximité ou sur les emprises ferroviaires ou fluviales peuvent satisfaire les besoins de la logistique urbaine. Il convient de procéder à leur recensement et de veiller à leur disponibilité. Les pôles d'échanges de transports de personnes comme les gares ferroviaires ou routières ont vocation à devenir d'importants pôles commerciaux et donc des générateurs de trafics importants pour la logistique urbaine, tant pour les flux entrants que sortants.

⁶ Quels sont les enjeux de la logistique urbaine ?

http://www.developpement-durable.gouv.fr/IMG/pdf/DGITM_Logistique_urbaine_8p_web.pdf

- Mettre en place une stratégie de déploiement de nouveaux matériels (à gaz, électriques). Les actions concernent les véhicules mais également les matériels de manutention. Si une mutation rapide vers des véhicules propres en matière de logistique urbaine est nécessaire, un retard a déjà été pris dans ce domaine, notamment pour les véhicules électriques de plus de 3,5 tonnes. Il est donc urgent de développer des solutions transitoires basées sur l'exploitation du gaz carburant. Il s'agit également de mieux coordonner les transports de fret et de personnes en favorisant le développement des transports publics, du covoiturage et de la mutualisation en matière de logistique urbaine.
- Promouvoir de nouvelles organisations logistiques. Les logisticiens s'engagent dans des réflexions sur l'adaptation de leur schéma logistique aux nouvelles contraintes environnementales anticipées, notamment sur les chaînes logistiques d'approvisionnement. Lorsque cela est possible, la mutualisation des flux et la rationalisation des moyens pourrait être réalisée à l'aide du transport ferroviaire ou fluvial pour les flux provenant de l'extérieur de la ville et à destination d'un espace logistique urbain. La distribution vers le destinataire final serait systématiquement assurée avec des véhicules propres. L'entrepôt logistique serait vertueux sur le plan énergétique, voire à énergie positive, le surplus étant utilisé par les véhicules propres.
- Mieux faire connaître le rôle de la logistique urbaine Il convient de mettre en place une information et une formation sur cette thématique portant à la fois sur l'analyse systémique de la ville, l'utilisation des outils informatiques disponibles (modèles) et sur les actions possibles. Si la mobilité des personnes est au coeur des réflexions actuelles, celle de la marchandise occupera, à coup sûr, élus et techniciens dans les décennies à venir.

Les enjeux économiques, environnementaux, sociaux, voire sociétaux mettent les pouvoirs publics en situation de transformer une activité peu valorisée en une activité de services structurante à forte valeur ajoutée et d'inscrire la logistique urbaine dans la dynamique de la croissance verte.

ANALYSE DES DONNÉES RECUEILLIES

A travers les différentes données recueillies, un certain nombre d'objectifs se présentent accompagnés d'exemples de certaines entreprises:⁷

*Quels sont les objectifs de la logistique urbaine ?

- Mener une politique volontariste de préservation et d'acquisition de foncier pour les activités logistiques
- Favoriser le développement d'un immobilier logistique de nouvelle génération
- Encourager les modes alternatifs à la route : le ferroviaire et le fluvial
- Améliorer l'efficacité du dernier maillon en promouvant de nouveaux schémas d'organisation
- Faire naître une gouvernance globale et souple

*Exemple de Réussite de la logistique urbaine:⁸

⁷ Quels sont les objectifs de la logistique urbaine ?

<http://www.etudes.cci-paris-idf.fr/rapport/191-la-logistique-urbaine-metropole-parisienne-lau1002>

⁸ Exemple de réussite de la logistique Urbaine : Association de Ferrero et STEF

Association de STEF & Nutella : Pour garantir un transport de marchandises plus vert dans les rues de Bruxelles

« Bruxelles, le 28 janvier 2013, FERRERO et STEF mettent en service un nouveau camion hybride frigorifique dédié aux produits FERRERO livrés dans les zones urbaines et périurbaines de Bruxelles. Les objectifs sont variés : la réduction des émissions de CO₂, la diminution de la consommation de carburant et l'atténuation du bruit pour les riverains. Le Premium Distribution Hybrys Tech, développé par Renault Trucks, est particulièrement adapté aux livraisons urbaines car le mode électrique ne cède la place au moteur Diesel qu'au-delà de 20km/h. Il effectuera un trajet quotidien de 200 km autour de l'entrepôt FERRERO de Ternat, pour livrer des points de ventes et des plates-formes de distribution locale, situés dans la banlieue bruxelloise.»

Figure 2: Camion hybride Nutella



Source: retail-chain.fr

«Le camion hybride est un porteur frigorifique de 19 tonnes. Il est destiné à transporter les produits Ferrero (Nutella, Kinder, Ferrero Rocher, Mon Chéri, etc.) à une température constante comprise entre 12°C et 18°C pour garantir le maintien d'une qualité optimale des marchandises ; il est donc question ici d'une température dite « dirigée ». Le camion pourra transporter jusqu'à 18 palettes et débutera ses cycles de livraison dès 5h00 le matin. Il s'agit du véhicule hybride de Renault Trucks, le Premium Distribution Hybrys Tech de 19 tonnes. La technologie hybride dite « parallèle » associe un moteur thermique et un moteur électrique. Ils fournissent de la puissance aux roues selon plusieurs scénarios de répartition : soit les deux en parallèle, soit séparément. Cette technologie, expérimentée depuis près de quatre ans par Renault Trucks, est particulièrement adaptée à la distribution en ville car, outre un gain certain de consommation de l'ordre de 20% grâce à l'utilisation du moteur électrique, elle réduit sensiblement le bruit pour les riverains. Ce véhicule propre répond aux dernières normes en vigueur pour la réduction des nuisances sonores et ses équipements sont conformes au label PIEK.»

*Quels sont les principes et avantages de la technologie hybride ?

www.Stef.com/notre-groupe/communication...Stef.../file

Le principe de la technologie hybride est simple : l'énergie cinétique du véhicule est récupérée lors du freinage ou des phases de décélération afin de la transformer en électricité. Cette énergie est stockée dans les batteries de traction qui fonctionnent en parfaite autonomie (il n'est pas utile de les recharger). Elle est ensuite restituée par le moteur électrique. Le moteur démarre en mode électrique jusqu'à environ 20 km/h. Au-delà, le moteur diesel se met automatiquement en route pour prendre le relais. Il n'est alors utilisé que dans les phases où il consomme le moins (hors phase de démarrage et de forte accélération). La technologie hybride actuelle est particulièrement adaptée aux opérations de transport de marchandises en zones urbaines ou périurbaines qui nécessitent des arrêts et des démarrages répétitifs :

- Diminution de la consommation de carburant : jusqu'à 20% d'économie.
- Réduction des émissions de CO2 : moins 20%.
- Niveau sonore abaissé à 74 dB en mode électrique.

«Ensemble, STEF et FERRERO s'engagent pour préserver l'environnement»

Avec la mise en circulation de ce premier véhicule hybride spécialement développé pour effectuer des livraisons silencieuses en milieu urbain et périurbain, FERRERO poursuit son engagement en matière de développement durable » déclare Grégory Debuchy, Directeur Supply Chain France - Benelux de FERRERO.

«C'est une première pour FERRERO : la technologie hybride est une pièce maîtresse du puzzle technologique qui répond à l'ambition du groupe de moderniser ses moyens de transport pour qu'ils soient plus respectueux de l'environnement. Notre objectif est de réduire l'impact environnemental de l'ensemble de notre chaîne logistique. FERRERO s'est engagé d'ici 2015 à atteindre 6% du volume transporté sur rail ou par voie fluviale ainsi qu'à réduire de 10% ses émissions de gaz à effet de serre liées aux transports de marchandises et de personnes. Nous sommes particulièrement heureux de franchir un pas supplémentaire dans cette direction grâce à notre partenaire logistique STEF.»

« Serge Capitaine, Directeur général délégué de STEF précise : « Avec FERRERO, client du groupe depuis bientôt 20 ans, nous travaillons dans une démarche collaborative d'amélioration continue sur tous les sujets et en particulier sur les innovations permettant de réduire l'empreinte carbone de leurs activités logistiques. Ainsi, depuis 2005, les activités rail-route ont été intensifiées pour franchir le cap symbolique des 50 millions de pots de Nutella transportés par rail en 2010. FERRERO et STEF ont également mis au point en 2011, une opération inédite en transport combiné fluvial-route entre Rouen et Paris. La mise en circulation de ce nouveau véhicule hybride à Bruxelles s'inscrit dans cette démarche permanente d'innovation. Elle va nous permettre de repenser l'organisation et les horaires de livraison à proximité ou dans les zones résidentielles».

RECOMMANDATIONS ET LIMITES

Les enjeux liés à la logistique urbaine sont bien identifiés par les collectivités mais la multiplicité des acteurs, la superposition des compétences et l'évolution permanente de la Supply Chain en font un sujet complexe à traiter.

Les contributions du CEREMA sur les questions de logistique urbaine sont de différentes natures :⁹

- Un suivi et un appui technique, méthodologique et juridique des actions et études que pourraient porter par les collectivités territoriales ou des études portées par l'Etat avec les collectivités. Le

⁹ Cerema.fr/fr/activites/mobilite-transport/planification-gouvernance-organisation-mobilites/logistique-transports-marchandises/vision-objectifs

CEREMA participe ainsi à l'accompagnement de l'expérimentation de la mise en oeuvre du cadre national sur les chartes logistiques, portée par l'Etat, auprès de 7 collectivités depuis le premier semestre 2017 ;

- La production d'études techniques à destination des services déconcentrés et des collectivités territoriales permettant d'apporter un éclairage sur des problématiques, enjeux ou expériences en lien avec la logistique urbaine ;
- L'accompagnement, la formation, et l'animation de réseaux de collectivités. Le CEREMA coanime le réseau des référents transport de marchandises des collectivités. Ce réseau, qui comprend une cinquantaine de collectivités, se réunit deux fois par an. La mission du CEREMA comprend également celle de référent technique, ce qui l'amène à répondre aux questions des agglomérations tout au long de l'année.

Dans un périmètre qui peut aller au-delà de la ville, le CEREMA se positionne sur les questions de logistique de circuits-courts alimentaires. Les objectifs poursuivis sont multiples et consiste à identifier les spécificités territoriales des organisations logistiques, accompagner les agriculteurs dans le développement de circuits logistiques plus durables ou encore l'impact des nouvelles TIC pour la mise en place de solutions logistiques coopératives.

Dans ce cadre, le CEREMA participe à plusieurs projets :

- Le projet OLICO-Seine porte sur l'analyse de la logistique des circuits courts alimentaires en Normandie et Île-de-France pour révéler les spécificités territoriales des organisations logistiques en Vallée de Seine et engager des démarches de sensibilisation des producteurs aux enjeux logistiques en partenariat avec les acteurs territoriaux. Le CEREMA effectue les évaluations économiques et environnementales des organisations logistiques de ces circuits logistiques par le développement d'un outil de calcul spécifique, sous forme d'une application web ;
- Le projet COLCICCA vise entre autres à accompagner les agriculteurs dans la recherche de solutions logistiques plus durables ;
- Le projet VITICOL interroge la diffusion des TIC dans les organisations logistiques et leur rôle dans le développement de pratiques plus collaboratives pour la distribution des produits alimentaires dans les circuits courts.

CONCLUSION

Garante de la vitalité et de l'attractivité économique d'un territoire, la logistique urbaine est un anneau de la chaîne essentielle du système urbain. Il est question d'un secteur dynamique et en totale transformation, qui doit se restructurer afin d'essayer de répondre à de nouveaux enjeux. En raison de nombreuses intégrations, spécialement environnementaux, sanitaires, moins chères et sociaux, les administrations territoriales et l'Etat prennent maintenant conscience du vrai intérêt à se poser des questions de logistique urbaine. La ville de Dijon s'est totalement emparée de ces problématiques en adoptant un plan d'actions pour une logistique urbaine durable et en instaurant une instance de gouvernance pour travailler en concertation avec les acteurs des différents secteurs touchés par l'organisation urbaine.

La pollution atmosphérique dans nos villes constitue une des intégrations fondamentales d'ici les prochaines années. Cette problématique est devenue sociétale et la prise de conscience, collective. Chacun est amené à interroger ses pratiques : du citoyen dans ses modes de déplacement et de consommation, au fournisseur dans son mode de distribution, aux fabricants de voitures et aux énergéticiens dans leur politique de développement de sources alternatives au gasoil, aux transporteurs

dans leurs décisions de 4 roues, jusqu'aux collectivités dans leur politique au bénéfice de la qualité de l'atmosphère.

Plusieurs leviers peuvent être mis en fonction par les administrations locales pour faire quelque chose sur la pollution atmosphérique et le transport de marchandises à la dernière partie intégrante, tout comme le transport d'êtres humains. Mais encore en bien plus sévères face aux automobiles les plus polluants, les réglementations adoptées par de multiples villes en Europe vont dans ce sens.

La place de l'automobile en agglomération est actuellement réduite en interpellation bénéficiant aux modes doux et des transports en commun. Cette réalité s'adjoint d'une primordiale progression de l'activité de l'acheminement de marchandises en agglomération qui doit parvenir à concilier la continuité de sa compétitivité économique et la baisse de ses impacts sur la pollution atmosphérique. Planification, réglementation, infrastructures..., il y'a maintenant différents moyens pour simplifier et concourir le transport de marchandises dans les centres urbains. Tandis que les actions des collectivités étaient jusqu'à maintenant essentiellement positionnées sous le signe de l'obligation aux utilisateurs (réglementation de circulation, taxes), elles doivent maintenant s'enregistrer à l'intérieur d'un projet plus total, en soutenant par exemple des acteurs qui s'engagent dans des démarches vertueuses et innovantes, en stimulant d'autres options possibles au transport routier et en se basant sur une prise de conscience collective pour privilégier la progression des méthodes.

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A Critical Analysis of the Role Played by Free Movement of People to Economic Development in the ECOWAS Region

Mamadou SIMPARA

Master's student, Department of Economics, Anadolu University, simparamamadou65@gmail.com, ORCID: 0009-0004-2222-677X

ABSTRACT

The Economic Community of West African States (ECOWAS) adopted in 1979 the Protocol on free movement of people with the objective of granting the rights of free movement, residence and establishment to the community's citizens. More than forty years after the adoption of the Treaty, this article discusses the journey of free movement in the region. Only the first of the three stages of implementation of the Treaty's provisions has been fulfilled; the non-full realization of the implementation is due to some challenges that have been the subject of multiple treatments. Free movement of people enters in the sphere of regional economic integration whose aim is to improve the socioeconomic level of member states; in this domain the EU is the most advanced model. Thus, free movement in the ECOWAS can be approached in the light of the EU case. By having a comparing analysis between the two communities, it appears that the elements that have assured European success are lacking in the ECOWAS. Furthermore, an examination of the reality in the region shows a complexity that is unique to West African countries. Therefore, it stands out that efforts to fully implement free movement, that it may contribute to the improvement of the economic development of ECOWAS countries, must be preceded by the satisfaction of many conditions at different levels.

Keywords: Free movement of People, Economic development, Economic Integration.

Une Analyse Critique du Rôle Joué par la Libre Circulation des Personnes dans le Développement Économique de la Région CEDEAO

RÉSUMÉ

La Communauté Économique des États de l'Afrique de l'Ouest (CEDEAO) a adopté en 1979 le protocole sur la libre circulation des personnes dans le but d'accorder aux citoyens de la communauté les droits de libre circulation, de résidence et d'établissement. Plus de quarante ans après l'adoption du traité, cet article examine le parcours de la libre circulation dans la région. Seule la première des trois étapes de la mise en œuvre des dispositions du traité a été franchie ; la non-réalisation complète de la mise en œuvre est due à certains défis qui ont fait l'objet de multiples traitements. La libre circulation des personnes entre dans la sphère de l'intégration économique régionale dont l'objectif est d'améliorer le niveau socio-économique des États membres ; dans ce domaine, l'UE est le modèle le plus avancé. Ainsi, la libre circulation dans la CEDEAO peut être abordée à la lumière du cas de l'UE. En procédant à une analyse comparative entre les deux communautés, il apparaît que les éléments qui ont assuré le succès de l'Europe font défaut à la CEDEAO. En outre, un examen de la réalité dans la région montre une complexité qui est propre aux pays d'Afrique de l'Ouest. Par conséquent, il apparaît que les efforts visant à mettre pleinement en œuvre la libre circulation, afin qu'elle puisse contribuer à l'amélioration du développement économique des pays de la CEDEAO, doivent être précédés par la satisfaction de nombreuses conditions à différents niveaux.

Mots clés: Libre circulation des personnes, Développement économique, Intégration économique.

INTRODUCTION

To better face the challenges of the globalization, countries group into economic unions, thus forming Regional Economic Communities (RECs) across the world. The existence of economic unions can go back to the nineteenth century, to the time between the global wars and after the Second World War which saw many waves of regionalism (Langenhove and Costea, 2005). Through RECs economic integration is aimed, which is the process of strengthening economic ties between Member States of the communities. Regionalism is meant to achieve the goals that are difficult to be obtained worldwide, e.g. the abolition of obstacles impeding trade, the flows of capital and people inside a given economic community.

The ultimate goal of the efforts towards the intensification of movement of flows of capital and people in the economic union is the improvement of the socioeconomic conditions of people in that union. Because of its complexity, the impacts of movement of people on economic development of RECs are difficult to estimate and appreciate.

The Economic community of West African states (ECOWAS) is one the eight regional economic communities (RECs) recognized by the African Union in Africa. The first treaty establishing the ECOWAS was signed on 28 May 1975 in Lagos, after a renewed treaty was agreed upon in July 1993 in Cotonou. The community is now made of 15 West African countries which are regrouped in three linguistic groups (inherited from colonization); the French-speaking countries: Benin, Burkina Faso, Guinea, Côte d'Ivoire, Mali, Niger, Senegal and Togo; the English-speaking countries: Gambia, Ghana, Liberia, Nigeria and Sierra Leone; and the Portuguese-speaking countries: Cabo Verde and Guinea-Bissau. Also, the ex-French colonies of the organization plus Guinea-Bissau form the West African Economic and Monetary Union (WAEMU) and the West African Monetary Zone (WAMZ). Its population counts for over 300 million people tucked in a total area of about 5.1 square kilometers.

Around the world RECs can be found, they are efforts made by countries to create blocks of liberalization. That process of liberalization starts with some economic arrangements among some countries by the establishment of a free trade area, after a customs union of the area follows; by adding the free movement of persons and capital to free circulation of goods and services the community tends towards the creation of a common market; after the harmonization of monetary and economic policies, an integrated economic community will be formed. Some RECs have recorded successful progresses in economic integration; a best example of them is the European Union (EU) which is the current advanced model of REC.

The main motives behind the creation of regional economic arrangements (REAs) or RECs have been mainly free trade in goods and services and free movement of capital. Free movement of persons has constituted a minor factor though high level of mobility is ensured in some regions, as in the case of EU. Thus, there is a more and more deregulation concerning the flows of goods, services and capitals. Meanwhile, countries are increasingly taking measures to close borders to foreigners despite the fact that thousands of people are moving every day from their places, among whom a considerable number perishes.

One of the most migrating zones in Africa is West Africa; but, contrary to the impress given by the number of deaths of sub-Saharan migrants on the road to Europe constantly reported by medias, the flows of migrations from West Africa to Europe are much less important than the flows inside the West African region. The numbers of migrants within West Africa were estimated to be 7.5 million, accounting for 86 % of total emigration (Pécoud et al., 2017; OECD-SWAC, 2008).

The ECOWAS, in its efforts towards integration, adopted the Protocol on Free Movement of Persons, Residence and Establishment on the 1st of May 1979. To this preliminary Protocol supplementary protocols followed: the Protocol Relating to the Definition of Community Citizen; the Supplementary

Protocol on the Code of Conduct for the Implementation of the Protocol on Free Movement of Persons, the Right of Residence and Establishment; the Supplementary Protocol on the Second Phase (Right of Residence) of the Protocol on Free Movement of Persons, the Right of Residence and Establishment; the Supplementary Protocol Amending and Complementing the Provisions of Article 7 of the Protocol on Free Movement, Right of Residence and Establishment; the Supplementary Protocol on the Implementation of the Third Phase (Right of Establishment) of the Protocol on Free Movement of Persons, Right of Residence and Establishment.

By looking at these Protocols, the ECOWAS Authorities have been all aware of the important role that the smooth movement of people can play in the process of integration. The aim of integration being the improvement of life conditions of the countries involved, free movement of people should ultimately contribute to the leveraging of the development level of the citizens.

It is undeniable that West African countries are economically among the poorest countries on earth though years have passed since the creation of the ECOWAS. So, how could we explain this deteriorating state of West African countries despite the efforts made by the ECOWAS to enhance the level of economic integration through free movement of people? To answer this question, we may be brought to ask further questions: How have the implementations of the different protocols been? Have the different protocols on the free movement of people been fully implemented as expected? If not, what has impeded the implementation of the protocols? If yes, has there been any correlation between free movement of people and economic development inside the ECOWAS region?

THE THEORETICAL FRAMEWORK

Related to the topic are the generalities and theories on free movement of people (or persons) and its relationships with the progress of countries which tend to regroup to form integrating communities. The discussions on free movement cannot be done without preliminarily treating the notion of migration. A discussion on migration alone is not sufficient; its relationship with economic development must be given place.

The Theory of Migration

The Theoretical construction of migration

The phenomenon of migration is intimately linked to the history of mankind. From immemorial times till now humans have always moved from one place to another; migrating has been a need for survival for human species. Like any other phenomenon of human action, migration has also been the subject of thinking from social scientists. The construction of a theoretical framework that forms a discipline of studies depends on the nature of its object. Thus, different perceptions of the nature of the phenomenon bring about different approaches in studying it.

The Theoretical construction of migration

In his epistemological investigation of a general theory of migration, Mangalam and Morgan (1968) considered the misconceptions of the nature of migration as some of the causes impeding the establishment of the framework of a general theory, among other causes. According to him the early students of migration, in approaching the phenomenon, misunderstood its characteristics: Contrary to their perceptions, migration is not a random phenomenon; different from being an individual behavior, migration is rather an inter-individual or social behavior; migration is a complex whose study necessitates interdisciplinary approach; and separate migrations are not unique in kind.

Though non-economic factors are among the causes of migration, migration is generally viewed as an economic phenomenon. And Safa (1975) states that “migration is a manifestation of a world-wide shift from a rural agrarian base to an urban-industrial base in the economies of most Third World Countries.”

Some of the varieties of migration are return migration, circular migration, onward migration, intermittent migration, and transnational migration. One of the important features of migration is its being the third component of demographic change after birth and death.

Building a migration theory

Contrary to most of the fields of science, the birth of the studies of migration was not immediately followed by the construction of a general framework of theory. Till late, this framework took place. As mentioned above, Mangalam and Morgan (1968) in his *Human Migration* investigated the reasons for that absence of theory. Besides the nature of migration, according to him, reasons for the absence are related to the nature of data used, disciplinary orientations of the scholars, and a lack of concern by social organizational theorists for the phenomenon.

In migration literature there is a consensus that the works of Ravenstein in England laid the foundation of the migration studies. From the British Census of 1881 and data from many other countries, Ravenstein theorized the underlying principles that characterize the processes of migration in Britain in what he called the laws of Migration. Those laws were stated in three separate articles; the first one, which was exclusive to England, was published in the *Geographical Magazine*, and the later extending to cover Europe and North America were published in the *Statistical Journal* in 1885 and 1889 (Grigg, 1977). Below, those laws are stated out.

Another work that is considered to be an important study of migration from a theoretical point of view is Thomas and Znaniecki's *Polish Peasant in Europe and America* (1927) (Mangalam and Morgan, 1968). With their work there is a shift from a study of migration in national boundaries to an intra-national approach. The implications of globalization put emphasis on the phenomenon of migration across countries and even continents. The authors of the five-volume work, published at different times between 1918 and 1920, used original methods of studies. They used sources of information such as "correspondence exchanged between Polish migrants and their families, life histories and autobiographical accounts, letters written to local newspapers, documents of associations, church parishes and court records that migrants dealt with in various ways across Poland and America" (Sinatti, 2008). The use of personal documents for investigation gave a rough and authentic character to the data but, at the same time, posed the question of scientific validity to the results obtained from such unconventional sources of information at the time.

A view of the flow of migrants responding to the economic laws of labor demand and supply across some distance was developed by Stouffer (1940). He named that trend by the concept of "intervening opportunities" which stated that "the number of migrants over a certain distance and time is proportional to the number of opportunities in the center and inversely proportional to the development of intervening opportunities which are produced by economic expansion in the hinterland of larger conurbations". After the 1950s the migration had to be seen as a process involving decision making, so that a proper understanding of the phenomenon then had to take account the behavior of individuals as well as aggregates. Wolpert, in 1965, used field theory to explain differences of space experience of the migrants through the lifecycle, and to draw attention to the ambivalence of the decision making to migrate. The works that followed tried to further understand the behavioral process of the migrants in the acts of migration. Through observations of documentation provided by statistic officials, stress was put on the back-and-forth movements of migrants across distances, which made the observers see the migration from a mobility angle. They classified those movements as local migration, chain migration, circular migration, and career migration (Siddle, 2000).

According to the level of study the theories of migration can be classified under micro, meso and macro approaches; the micro-level theories study the choices and the behavior of migrants in their decision-making, the meso-level theories focus on migrants families and networks across sending and receiving

regions, while the macro-level theories tend to assess the social structures, large systems and long processes that shape the motivations and options of migrants (Stiglitz, Cortina and Ochoa-Reza, 2013).

The Ravenstein's Laws of migration

Ravenstein presented his two papers of the laws of migration respectively in 1885 and 1889 before the Royal Statistical Society. His laws were mentioned by most of the subsequent works on migration. Lee (1966), an early theorist of migration, discussed the laws before examining the factors motivating the phenomenon. Another work on laws is the Grigg's Ravenstein and the "laws of migration", published in 1977 by the Journal of Historical Geography. The laws listed by Grigg, in number of eleven, are as following:

(1) the majority of migrants go only a short distance; (2) migration proceeds step by step; (3) migrants going long distances generally go by preference to one of the great centers of commerce or industry; (4) each current of migration produces a compensating counter current; (5) the natives of towns are less migratory than those of rural areas; (6) females are more migratory than males within the kingdom of their birth, but males more frequently venture beyond; (7) most migrants are adults: families rarely migrate out of their county of birth; (8) large towns grow more by migration than by natural increase; (9) migration increases in volume as industries and commerce develop and transport improves; (10) the major direction of migration is from the agricultural areas to the centers of industry and commerce; (11) and the major causes of migration are economic.

Lee's Factors of Migration

One of the major tendencies in the elaboration of the migration theory has been the generalization of the different factors of the phenomenon. As stated above, migration being considered mostly an economic phenomenon, the factors at its core are therefore primarily of economic nature.

Upon an analysis of the laws of Ravenstein, Lee (1966) developed his theory of migration in which he stated the factors in the act of migration. Lee classified the factors in four categories associated with: the place of origin, the place of destination, the intervening obstacles, and the personal considerations. In both the places of origin and destination there are attractive and repulsive factors; those attractive are called Pull-Factors and those repulsive Push-Factors. The pull-factors are the positive elements that retain people to remain at some place or attract migrants from another place, meanwhile the push-factors are the negative conditions that cause people to leave a place. The move from the place of origin to the place of destination does not take place smoothly; they are factors that render the migration process challenging. The nature of those intervening obstacles influences the decisional attitude of migrants.

Migration and Development

For the purpose of this research, the kind of migration that is referred to is labor migration. The reason for this is simply the predominantly economic-oriented nature of the phenomenon. Besides, it is the labor migration that has consequential related impacts to the economic problem. This migration is voluntary, different from other kinds of movements which are caused by factors such as natural disasters, civil war or political crisis. Two of the categories of the typology of Tilly (1978), which are the chain and career types of migration, are part of this free labor migration and most integral to development; the other two typologies with less significant relation to the processes of development are the local and circular forms of migration (Stiglitz, Cortina and Ochoa-Reza, 2013). Internal migration, characterized by the rural-urban migration, is an important issue in many countries, however it is the international migration, movement of people across countries, that has a bold connection to the question of development. In economic literature the concept of development is approached diversely according to epistemological perspective. For this work, the concept of economic development refers to the improvement in the socioeconomic conditions of life.

The theory of the mobility of labor is embedded within economic liberalism that stands for the "laissez-Aller" or the efficient endowment of economic factors such as labor and capital, which is possible by

their free circulation across areas. One of the ultimate implications of this philosophical view in economics, that is well defended by the classics and the neoclassic, is that countries have better to gain by opening their borders and letting the economy be regulated by the push and pull factors. Till the half of XX century the flux of migration was from the North to the South which was characterized by the movement of colonization and the extension of capitalism; from the second half of the century the direction of the flux reversed, former colonies and countries from the South started migrating to their former colonial metropolis. Thus, the route of migrants took on a historical deterministic character.

That new reality caused economic and political debates on the linkages between migration and development. It is possible to identify three different corpuses of thoughts on the matter: the neoclassical approach, the historical and structuralism view, and the alternative approaches. The first one considered migration to be a contributor to development. As said above, it stands for free action of the push-pull factors. The rationality postulate of the neoclassical school considers individuals to be well aware of the disparities of wages across and to have access to information on the other parameters of the labor market. Upon that awareness the migrant can then take the decision to migrate by calculating the costs and the benefits of such adventure. The flows of migration would reduce the disparities and the wages to an equilibrium level; there must be no obstacles to that regulating mechanism of the market. This doctrine created in the 1950s and 1960s an overwhelming positive view on the linkages between migration and development (Castles, 2009).

The second paradigm is formed by the heterodox view, also known as historical-institutional theory, who have built their corpus on the dependency theory. The theory, which has its roots in the Marxian theory of dependency and was dominant in the 1970s and 1980s, stated that the South-North relation is at the expense of countries from the South because of colonial heritage. According to theorists of dependency, the emigration from the country of the periphery “South” is just another way of exploitation that deprives them of their human resource which is crucial for the dynamic construction of their economies.

In attempts to propose alternative approaches to the one-way dimensional point of view of the previous theories, theories such as the New Economics of Labor migration (NELM) which takes account household dynamics, risk-sharing and overcoming market inefficiency - is the current dominant perspective and states that migration has had a mixed but mostly a positive impact on economic development (Jeronimo Cortina & Enrique Ochoa-Reza, 2013) , Dual or segmented labor market theory, migration networks theory, and transnational theory were developed. Those theories have more direct connection to the topic of this study because they set out to link mobility to processes of development and economic integration (Castles, 2009).

De Haas (2007) presented this classification of the theories of migration and development as following:

Table 1: *Main phases in migration and development research and policies (De Haas, 2007)*

Period	Research community	Policy field
Until 1973	Development and migration optimism	Development optimism; capital and knowledge transfers by migrants would help developing countries in development take-off
1973-1990	Development and migration pessimism (dependency, brain drain)	Growing skepticism; concerns on brain drain; after experiments with return migration policies focused on integration in receiving countries. Migration largely out on sight in development field.

1990-2001	Readjustment to more subtle views under influence of increasing empirical work (NELM, livelihood approaches, transnationalism)	Persistent skepticism; tightening of immigration policies.
Up to 2001	Boom in publications: mixed, but generally positive views.	Resurgence of migration and development optimism under influence of remittance boom, and a sudden turnaround of views: brain gain, diaspora involvement.

Free Movement of People and Economic Integration

On the contrary of migration, which is a real phenomenon, free movement of persons is rather a wanted situation than a fact. In other terms, it is a political wish that translates into policies to smoothen the circulation of people between countries. It enters in the process of transnational migration. As said above, the movement of people has not enjoyed the same liberty as the movements of goods, services and capital in the context of globalization. What is difficult to achieve on a world-wide scale has been tried to be concretized in the more concrete basis of economic integration. Thus, free movement of people has constituted a core element in the establishment of the regional economic communities or economic unions.

The oldest and well-established of economic communities being the EU, whose creation was galvanized by the idea of lifting all restrictions to the movement of citizens (Pécoud and De Guchteneire, 2007), the concept of free movement can be analyzed within the context of the EU.

The evolution of integration in the EU with respect to free Movement of people

In the aftermath of WWII, the need for substantial cooperation among the previously belligerent countries, in order to improve the socio-economic conditions, has been stressed out by some European countries. That brought six European states together to establish three important intergovernmental bodies that laid the foundations of the economic integration in Europe; the European Coal and Steel Community (ECSC), or Treaty of Paris, was signed on the 18 April 1951, and the European Economic Community (EEC) and the European Energy Community (EAEC, also known as Euratom), or Treaties of Rome, were signed on 25 March 1957. The six countries to sign were France, Italy, Germany, Belgium, the Netherlands, and Luxembourg (Sokolska, 2022).

From the three bodies it is the EEC that came out to be the driving force to economic integration and involved to give birth to the current EU. The provisions of the establishing treaty of EEC concerning free movement covered only workers and the right of establishment. The Article 48 of the EEC Treaty (the French version) states the general dispositions concerning the movement of workers; the free circulation of workers is assured inside the community by the end of the transitional period; any discrimination, based on nationality, concerning employment, remuneration and conditions of works of workers of different Member States is abolished. The workers in public administration were not concerned by those provisions. Regarding the right of establishment, Article 52 mentions the removal of the restrictions to the undertaking of a resident of a Member State to establish, to create agencies and subsidiaries in another Member State (CEE, 1957). Thus, from 1978 to 1972 more than 8 million work permits were issued to foreigners by the original six EEC members; among those workers one third came within the EEC (Koikkalainen, 2021).

With the Treaty of Maastricht¹⁰, the more the whole process of integration accelerated the more the notion of free movement evolved to the concept of European Citizenship which is obtained automatically by all nationals of EU countries. With the implementation of the Schengen Agreements in 1995 the Schengen Area has come to existence. The Schengen Area, which is made of EU countries (except Bulgaria, Croatia, Cyprus, Ireland and Romania) and some non-EU countries (Iceland, Norway, Switzerland and Liechtenstein), enables the citizens that come from within to travel, work and live internally without being subject to border checks.

The movement in the Euro zone is highly mobile. According to Costica Dumbrava (2020), in 2018 there were 17.8 million EU movers (12.9 million of working age) and 1.5 million EU cross-border workers. As of 2020, according to Eurostat there were 15.4 million citizens of the 31-country free movement zone living elsewhere in the area (Koikkalainen, 2021).

Table 2: *Number of European Free-Movement Area Citizens Residing Elsewhere in the Area, by Country of Destination, 2020 (Koikkalainen, 2021)*

Country of residence	Number of migrants	Share of total (%)
TOTAL	15 339 185	100.0 %
Germany	4 402 596	28.7 %
Spain	1 649 663	10.8 %
Italy	1 477 974	9.6 %
France	1 392 652	9.1 %
Switzerland	1 378 935	9.0 %
Belgium	924 747	6.0 %
Austria	764 603	5.0 %
Netherlands	538 963	3.5 %
Norway	364 277	2.4 %
Ireland	345 972	2.3 %
Sweden	344 760	2.2 %
Denmark	237 137	1.5 %
Czechia	236 849	1.5 %
Luxembourg	223 887	1.5 %
Greece	175 220	1.1 %

¹⁰ It constitutes the Treaty on the EU that was signed in Maastricht in 1992 and entered into force in 1993.

Portugal	149 151	1.0 %
Finland	97 437	0.6 %
Hungary	78 747	0.5 %
Romania	60 182	0.4 %
Slovakia	58 737	0.4 %
Iceland	40 758	0.3 %
Poland	32 473	0.2 %
Slovenia	20 908	0.1 %
Estonia	20 179	0.1 %
Croatia	18 244	0.1 %
Liechtenstein	10 666	0.1 %
Bulgaria	10 154	0.1 %
Lithuania	7 711	0.1 %
Latvia	6 398	0.0 %

The challenges to free movement of people in the EU

Alongside the achievements of the EU in freeing the mobility of its citizens, the free movement in the EU has come across some challenges that impedes its future. Among the difficulties that have hindered free movement in the EU are the weakening in the single market, the effects of economic and financial crisis (between 2008 and 2009 the Union's GDP contracted by 700 million € and nearly 5 million lost their job), the concerns about the migratory flows and the terrorist threat, and the fear of social dumping (expressed via the observation of differences in labor costs).

From those factors an anti-EU sentiment (Euroskepticism) arose among some layers of the population in some EU countries. This anti-EU sentiment resulted with the divorce between The United Kingdom and the EU, famously known as Brexit. The United Kingdom left the EU on 31 January 2020. The country was one the considerable Member States of the Union and a major destination of European migrants; in 2019 about 4.4 million citizens of the Schengen Area were living in the UK (Koikkalainen, 2021).

Another major determinant that has severely impacted free movement in the EU is the COVID-19 pandemic that arrived in the early 2020 to Europe. Immediately restrictive measures to the cross-border mobility followed by the countries to halt the deadly virus from spreading. This resulted in the closing of European borders that hindered the movement of both persons and foods; the allowed movement was subjected to tight controls which are unusual in the EU.

Free movement of people and socio-economic development in the EU

The main purpose of political initiatives towards free movement is its contribution to economic integration. The free circulation, thus, by contributing to the integration of a community, is supposed to increase the general level of the socioeconomic conditions of the member countries. In order to discuss the link between free movement of people and economic progress in the EU works and researches have been done.

Kahanec and Pytliková (2016) assessed the impact of migration from the eastern countries of the EU to the Western countries. They approached the EU in its West-East dichotomy; the Western Europe constituting the most advanced and industrialized countries and the old EU member countries (they are in number of 15: EU15), the eastern Europe the less developed countries that were once part of the Soviet Union. These countries of Eastern Europe joined the EU in waves in 2004, 2007 and 2013; 2004 was the year of the biggest enlargement of the organization at once, with the joining of Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia (referred to as the EU10); in 2007 Bulgaria and Romania joined (EU2) and in 2013 Croatia was the last member joining the EU.

Their work studied the effects of immigration from the new EU member states (countries that joined in 2003, 2007 and 2013) and Eastern Partnership countries on the economies of the old EU member states (EU15) from 1995 (corresponding to the establishing year of the Schengen Area) to 2010. In this work, interest is put on the migration from the new EU member states only. To conduct their analyses, the authors used international migration data on bilateral flows and stocks of immigrants from 42 destination countries over the period 1980-2010. The EU15 were considered as destination countries and the EU12 as sending countries. The authors used an empirical modelling to process the data, with an aggregate production function framework; they investigated the “effects that immigration has on wages (as proxied by GDP per capita, PPP) and economic growth rate, as well as on total employment, physical capital, total factor productivity and the capital to labor ratio”.

The results of their regression analyses showed that the immigration from the new EU member states had positive and significant effects on GDP, GDP per capita, and employment and an effect on output per worker of the EU (EU15 and EU as a whole). These results confirm the claim that free movement of people (promoted by the European citizenship principle), that the East Europe countries have enjoyed after entering the EU, has contributed to the economic development of the EU by enabling an economic growth of not only the old EU members but also of the EU at large.

Organiściak-Krzykowska (2017) studied the determinants and the consequences of the increased mobility that occurred after the 2004 EU enlargement, from central and eastern European countries (CEE). It concerned the EU10 and EU2 countries. To illustrate that strong mobility, the number of immigrants for the CEE to the more industrialized West European countries have moved from 1.66 million in 2004 to 7.3 million in 2016. By analyzing the data regarding permanent international migrations in CEE in the years 2004-2015, the author distinguished two categories of countries: first category, which regroups The Czech Republic, Slovakia, Slovenia Hungary and Estonia had a positive net migration (the number of immigrants is higher than the number of emigrants). The second category, regrouping Poland, Bulgaria, Lithuania, Latvia and Romania, had a negative net migration (the number of emigrants is higher than the number of immigrants).

As for assessing the impacts of the East-West mobility, the flows remittances, that east European migrants sent to their countries in their residing in the west part of Europe, were analyzed by the author.

In the period of 2004-2005, the EU10 received a total inflow of 166.6 billion Euros from working abroad. The countries unevenly received remittances from their counterpart West European countries. The relative difference in the amount of remittances is not much revealing of the importance of these in the economic advancement of the countries. However, the share of remittances in the national GDP can give a glance of what is their contribution to the economy. This share is 3.72% for Hungary, 3.14 for

Latvia, 2.96 for Bulgaria, 2.9 for Slovakia, 2.05 for Lithuania, 1.95 for Estonia, 1.8 for Slovenia, 1.7 for Romania, 1.68 for Poland and 1.54 for The Czech Republic in 2015. On the other hand, emigration from the CEE countries is said to have positively influenced the economy of the receiving countries (the EU-15).

In his work, Klaus Müller (2019) analyzes the economic dimensions impacted by the free movement of workers; those dimensions are employment, unemployment, qualification and recognition rates, remittances, wages and labor productivity (minimum efficiency gains to date), and population structure and fiscal impact. According to the author the degree to which European citizens take advantage of the right to free movement of persons in the EU is influenced by the following factors:

- differing national wages and GDP
- physical distance
- unemployment rates and education levels
- the existence or absence of a common/similar language
- the presence of networks abroad from the home country
- the remaining obstacles in the destination countries.

At the end of his work the author concludes that “the free movement of economically active citizens leads to a higher employment and lower unemployment rates, as well as to higher productivity and income (remittances), and has a positive impact on taxes and social contributions.” He then finally estimated that the potential GDP gain from free mobility for the next 5 years would be €53 billion per year.

European countries are part of the Organization for Economic Cooperation and Development (OECD), a transatlantic organization that regroups the bulk of world’s most developed economies. Members of the OECD such as the United States, Canada, New Zealand, Australia have a long tradition of international migration; naturally the impacts of migration in these respective countries are matter of research because of their political implications. Some studies have been done in this regard. The OECD’s Migration Policy Debates issue of May 2014 tried to answer the question of whether migration is good for the economy. To do so, the paper studies the ways immigrants impact the economy in OECD countries for three areas: the labor market, the public purse and economic growth. The outcomes state that immigrants:

- play a significant role in the most dynamic sectors of the economy. In declining occupations like craft and related trade workers, machine operation and assembling, immigrants are filling “labor needs by taking up jobs regarded by domestic workers as unattractive or lacking career prospects”
- help address labor market imbalances in Europe
- contribute more in taxes and social contributions than they receive in individual benefits
- contribute to spur innovation and economic growth.

Ekrame Boubtane et al. (2016) studied the overall impact of immigration on economic growth in the OECD countries between 1986 and 2006. The authors used structural model to examine long term migration flows by country of origin and skill level on economic growth. The resulted that they obtained were the following:

- there is a positive impact from migrants’ human capital on GDP worker
- a 50 % increase in net migration of the foreign-born generates, on average, an increase of the three-tenths of a percentage-point in per worker GDP per year in OECD countries
- the long-run effect is, on average, about 2 %.

Morley (2006) conducted an econometric study causality between economic growth and immigration. The data serving in the study concerned Australia, Canada and the USA. Interestingly, he came up with a conclusion different from the results obtained in the previous studies; according to him, in the long-term economic growth, measured by per capita GDP, causes immigration. On the other hand, immigration does not induce economic growth.

Whatever the methods they used, the studies assessing the relationship between free movement of people and economic development show an overall positive picture; the EU has enjoyed and benefited from the smooth mobility of its citizens that has been possible by the determination of the organization.

RESEARCH METHOD

The Pattern of the Research

Given the nature of the topic, it has been preferred to conduct a qualitative work instead of a classical time-series analysis. The reason for this choice lies in the characteristics of the main variable which is the free movement of people. The proxy to represent the free movement of people could be the flows of migration; considering that migration is principally economically motivated, free movement of people in an economic region could be assessed in terms of free mobility of labor. However, it is difficult to empirically measure labor mobility; besides, in the specific case of ECOWAS region the mobility of people is considerably informal, meaning its flow is not appropriately evaluated, which makes the collection of data concerning free movement of people complicated.

Nevertheless, still the relationships between free movement of people and economic development in the ECOWAS can be assessed. It is intended to conduct a critical analysis on the topic by, firstly reviewing the different protocols on free movement of people adopted by the ECOWAS, the existing literature on migration, the relationship between migration and development, and the link between free movement of people and economic integration; secondly, mentioning some of works assessing free movement of people in ECOWAS; and lastly, as result of that analysis, in taking into account the current socioeconomic evolutions – the COVID-19 context, providing some insights on the topic.

The Scope of the Research

The research of the article is covering one of the key indicators of economic integration which is free movement of people. It is investigated inside the ECOWAS region which is made of fifteen (15) West African countries. The phenomenon of economic integration and the reality of free movement of people in the ECOWAS region are examined.

Data Collection

This work being primarily qualitative, the data to be collected for the redaction of this article are through desk research which provides the obtention of books, reports, articles, etc. Through the Anadolu University Online Library Proxy many resources have been reached out. Because of geographical limitation and absence of means to travel for a field observation, no polling or interview is being made for the conduct of this research.

FREE MOVEMENT OF PEOPLE IN THE ECOWAS REGION

After dedicating some lines to migration, it is time to start opening the question of free movement of persons in West Africa. As it has been clarified in the previous pages, the international migration is different from international mobility which is a displacement of back and forth of individuals between points of settlements and movements. It has also been said that the factors determining the fluidity of mobility are of political nature. As a matter of illustration, the European case has been picked to show

how a certain level of mobility can be achieved through a serial and incremental implementation of collective political from an integrating group of countries. For the ECOWAS, the political willingness to free the movement of people in the region is expressed in the ECOWAS Free Movement Protocol.

A presentation of the ECOWAS Protocols on free movement of persons

The ECOWAS has adopted its Protocol on free movement of people in 1979 and has later added some supplementary protocols. Below are the provisions of these Protocols.

The Protocol on Free Movement of Persons, Residence and Establishment

Four years after the founding of ECOWAS, the Organization adopted its Protocol related to free movement of persons, signed in Dakar on 29/05/1979, and was ratified in 1980. The Protocol starts with a recall of Article 2 of the ECOWAS treaty (founding Treaty) that urges Member States to “ensure the abolition of the obstacles to free movement of persons, services and capital”. Also, a recall was made of paragraphs 1 and 2 of Article 27 that respectively “confers the status of Community citizenship on the citizens of Member States and enjoins Members States to abolish all obstacles to freedom of movement and residence within the Community” and demands of Member States to “exempt Community citizens from holding visitor’s visa and residence permits and allow them to work and undertake commercial and industrial activities within their territories”.

The Protocol granted to the “Community citizens” the right to enter, reside and establish in the territory of Member States; the granting was about to be concretized progressively in a transitional period of fifteen years from entry into force of the Protocol. The three grants were to be implemented in three phases, each one in a phase.

The implementation of the first phase had to abolish all visas and entry permit for citizens from the Community in the travel not exceeding ninety (90) days. The implementation of the second phase could then begin after a five-year period of the entry into force of the Protocol.

The Phase 1 officially started to be implemented on 05/06/1980 and expired on 04/06/1985 (Supplementary Protocol on the Second Phase).

The Protocol Relating to the Definition of Community Citizen

This protocol defined the “Community citizen” (Article 1) was adopted on 29/05/1982. It defines what is a “community citizen” in the ECOWAS.

The Supplementary Protocol A/SP.1/7/85 on the Code of Conduct

The first supplementary protocol to guide the implementation of the main protocol was related to the code of conduct that was signed on 06/07/1985. This one states the general rules governing the exercise of the rights granted by the Protocol on Free Movement of Persons, the Right of Residence and Establishment. For this, it assigns role and obligations to Member States of origin and host Member States of immigrants; for the migrants, their rights and the obligations upon them to fulfil in order to benefit from the provisions of the Protocol are stated out. In this supplementary protocol on code of conduct, mutual cooperation in the sharing of information and fair treatment reserved to migrants among and between Member States of the organization is emphasized.

The Supplementary Protocol A/SP.1/7/86 on the Second Phase (Right of Residence)

The phases following the first phase of implementation were to be undertaken upon observation and recommendations of the concerned commission (the main Protocol – paragraph 3 of Article 2). This protocol enjoins Member States to “grant to citizens of the Community who are nationals of other Member States, the right of residence in its territory for the purpose of seeking and carrying out income earning employment” (Article 2). Could benefit from the right of residence those who would apply for jobs effectively offered, travel for this purpose, hold employment in Member States. The right did not cover employment in civil sector. The Community citizens, after entering another Member State’s

territory without visa, should get an “ECOWAS residence card” or a residence permit in the host country. Border area workers, seasonal workers and itinerant workers could join all the rights of movement in all the Member States in the course of the activities without enjoying the right of residence. This supplementary protocol was signed on 01/07/1986.

The Supplementary Protocol A/SP.1/6/89 Amending and Complementing the Provisions of Article 7 of the main Protocol

This supplementary protocol was an amending one to the Article 7 of the main protocol. The said Article was as following:

Any dispute that may arise among Member States regarding the interpretation or application of this Protocol shall be amicably settled by direct agreement. In the event of failure to settle such disputes, the matter may be referred to the Tribunal of the Community by a party to such disputes and the decision of the Tribunal shall be final.

The amendment relegated the role of the settlement of the disputes to the Authority of Heads of states and governments, thus removing judicial involvement. It was signed on 30/06/1989.

The Supplementary Protocol A/SP.2/5/90 on the Implementation of the Third Phase (Right of Establishment)

After the rights of visa-free entry and residence, the provisions of the implementation of the third phase concerning the right of establishment were detailed in this supplementary protocol that was signed on 29/05/1990. The second phase it followed was meant to expire on 04/06/1990. The supplementary protocol defines the right of establishment as “the right granted to a citizen who is a national of the Member State to settle or establish in another Member State other than his state of origin, and to have access to economic activities, to carry out these activities as well as to set up and manage enterprises, and in particular under the same conditions as defined by the legislation of the host Member State for its own nationals” (Article 1). While the right of residence concerned mainly workers, the right of establishment concerns businessmen or promoters of businesses; its provisions thus are elaborated around the movement of capital and promotion of investments of citizens of the community with the Member States.

The operationalization and implementation of the ECOWAS Protocols on free movement of persons

After presenting the different protocols of ECOWAS on free movement of people in the previous section, in this section the implementation of their provisions is discussed. From the time of the ratification of the main protocol (1980) till now 41 years have passed; for this reason, there is much to say on the effectiveness of the protocols. Though the community of ECOWAS can praise itself for attaining some achievements in the field of integration, the expected results from the protocols are far from being attained. Thus, after making state of the evolution of the implementation, the factors or the causes that have impeded the effective implementation will be discussed.

The Evolution of the implementation of the Protocols

The provisions in the Protocol on Free Movement of Persons, Residence and Establishment were to be operationalized in a period of fifteen (15) years after the enter into force. The path towards total free mobility in the region were divided into three phases concerning respectively the rights to enter, reside and establish; each phase was consigned a period of five (5) to be conducted: Phase 1 (1980-1985), Phase 2 (1985-1990), Phase 3 (1990-1995). The first phase has been fully implemented with the successful achievement of the aim of the abolition of visa to enter the member countries for a maximum day of ninety (90) days. With a delay, the second phase started in 1986 and has not enjoyed the same

level of fulfilment as the first phase. Unfortunately, the implementation of the third phase has not started till date (Adepoju et al., 2007).

The most notable achievement in the implementation of the protocol has been the removal of visa requirements for community citizens to enter any member state upon a stay no longer than ninety (90) days (Adepoju, 2002). Following this acquis is the abolition of mandatory resident permits in the member states. Relating to travelling ECOWAS has been able to provide some instruments such as Brown Card Travel Certificates and ECOWAS travelers' cheques that can be used by the community citizens to travel with ease in the region. Concerning the residence, ECOWAS has issued ECOWAS permit that can be obtained from competent authorities of the member countries. Another major achievement is the instauration of the ECOWAS Passport that is the common Passport which is to replace national passports in all member countries.

Even though the ECOWAS's protocol is five (5) years earlier old than the European Schengen Initiative, EU surpasses by far ECOWAS as being the most integrated form of free movement area, not only of people but also of trade and capital. This ineffectiveness of the ECOWAS' protocol of not being able to create a free movement zone in the West Africa region is due to some factors that hinder the full implementation of the protocols.

Factors impeding the effective implementation of the Protocols

A large corpus of literature is available on the assessment of the implementation of the different ECOWAS's protocols on free movement of people. From that literature many causes are advanced to explain the slow progress of the community towards full elimination of barriers among member states. Here, the causes are regrouped into categories according to their nature.

Institutional factors

The most noticeable feature of regionalism in West Africa is the overlapping membership of the countries to different organizations, in other terms the multiplicity of regional regroupings of West African countries. This state of things is itself caused by the repartition of the countries into linguistic blocks which is sadly colonial inherited: mainly the three linguistic block of English, French and Portuguese languages. As result, different institutional systems of governance coexist in the most inclusive regrouping of ECOWAS, which coexistence renders difficult the smooth compliance of the requirements implied by the decisions of the organization (Adepoju, 2002).

In the region, the countries that are called the francophone countries, that were colonized by France and whose official language is French, surpass the others in number. During colonial period, those countries under French domination were regrouped in the community AOF (French West Africa); the French doctrine of a "French Union" had been so well implemented and rooted that it affected all the political initiatives that were conceived by the countries after their independences. Thus, the francophone countries of West Africa reshaped the old organizations or created new ones, but all characterized by their common experience of being French colonies. They have advocated (on their own detriments) French influence in the region; and through them France has vividly fought against the anglophone influence led by Nigeria. That conflict of interest by procuration has marked the journey of integration since its beginning. Even in the recent revolutions of socioeconomic and political atmospheres in the region, the foreign implication is reproved not only by officials of some member countries, but also by common citizens of the community¹¹. Therefore, the foreign print in the institutional setting of regionalism in West Africa has not only impeded the successful exercise of cooperation but will continue

¹¹ Recent evolutions in Mali, Guinea, Burkina Faso, and Niger.

to undermine the spirit of communion and mutual trust between the countries. This strange cacophony has hindered the realization of some major decisions that have long time been taken by the leaders¹².

Moreover, institutional problem is experienced by the countries taken individually. The institutional frameworks that characterize the socio-political and economic lives of West African countries are artificially set; inherited from colonization or copied from the systems of ancient colonizers, they do not correspond to the reality of the West African society, and therefore are not in a position to deal with the resolution of problems and planning of the future for West African citizens. That incapacity makes West African states in the eyes of their citizens illegitimate. By looking at all the institutional problems (no rule of justice, endemic corruption, coup attempts and coup d'états, concentration of power by an elite, no inclusivity in the sharing of power, etc.) faced by the countries of the region, one can barely talk about the existence of a functioning state.

Contextual factors

In this sub-section of contextual factors, the socio-economic conditions that coincided or accompanied the adoption and the implementation of the protocols have been gathered. The time of ratification of the main protocol coincided with a period of global recession that hit most of the African countries, including countries of ECOWAS. The period of 1980s was characterized by economic crises that affected mainly mineral resource-based countries; Nigeria, which had just been turned to a receiving country of migrants in the region, due to the crisis and the difficulties resulting of it, expelled many migrants from its soil. From that decade through the 1990's to beginning of 21st century, the contagious civil wars in Liberia and Sierra Leone had posed serious problems to the implementation of the Phase 2 and Phase 3 of the protocol on free movement.

The underlying spirit in the integration of countries is to enhance the level of interactions, mainly economic, among and between the member states of the integrating community. By promoting free trade, free movement of people and capital, integration aims at boosting the collective potential of the members. Meanwhile, to participate adequately in the process of integration, member states must have some requirements for it, meaning their micro and macroeconomic conditions play a great role in their gaining from their integration with one another. When looking at the socio-economic health condition of the ECOWAS countries, the national economies of most of countries are not built enough to allow some consequential gains from any economic regrouping. As an illustrating example, the region lacks the minimum level of good infrastructures which are the concrete driving forces of integration.

So that the socio-economic conditions of the ECOWAS countries do not favor the process of integration in general and the implementation of the protocol on free movement of people.

Technical factors

The public, the primarily concerned by the protocols, is not aware of the provisions in the different protocols of free movement. Even the officials, those in charge of the correct implementation of the provisions, most of the time do not have knowledge of the existence of such measures targeting the freeing of movement of persons with their goods. That ignorance of the protocols from both the public and the officials causes the former to resort to illegals means to get what the provisions guarantee them for free; and the later to abuse of their positions to harass users of transnational borders. Adepaju (2002) relates some of other technical issues: "the non-convertibility of currencies hinders financial settlements and the harmonization...A high proportion of cross border movement in the subregion is unrecorded

¹² An example is the common currency ECO, this was scheduled for December 2009 but has not yet happened. The ultimate goal is to unite the WAEMU and the WAMZ to form a West African Monetary Zone. and airline for ECOWAS would take off by 2004 (Adepaju, 2015).

due to the ubiquitous roadblocks across frontiers, the lengthy and costly formalities at border posts, and the corruption of officials” (p.13).

It is more unlikeable that ECOWAS or the member countries dispose the required technology to implement a centralized and coordinated tack of exchanging and circulating information. Furthermore, mechanisms to collect accurate data on migration movements in the region are non-existent. Adepoju (2009) talks about an inadequacy of the migration data for the compilation of national migration policies, its inconsistency and not comparability across countries. Therefore, in the absence of reliable migration data any policy regarding migration would come unsuitable; and any further initiative would not be supported by a sound knowledge of the migration patterns and the influx of movements. The ACP Observatory on Migration’s 2014 study of labor migration in the ECOWAS region reveals that: “the absence of comprehensive, reliable and accurate data on migration and labor markets as a major obstacle to the facilitation of labor mobility”.

Adepoju et al. (2007) deplores the non-establishment of national committees for the monitoring of the implementation of the protocols by member states, and the ineffectiveness of their work in countries where they exist.

Stability factors

Logically, all initiatives of any kind are meant to be undertaken in a stable environment. The stability is of a diverse nature: social stability, political stability, economic stability and safety. Barely, one of these different facets of stability is fully assured. One can say that instability define life in the region of West Africa. The region’s experience with the first regimes of governance, after independences, has resulted into bitter memories of hardship, oppression and tortures from the tenants of power. Unfortunately, the so-called democratization process of the 1980s through the 1990s was rather an imposition of ideal of democracy that was judged suited by “alien brains”. The inadequacy of this imported type of political regime, conjugated with an absence of concerted local political regimes favored the rejection of the political leaders and the systems they entertain by the peoples. That rejection has manifested in an infernal vicious circle of political unrests, rebellion movements and military coup d’états.

One can barely talk about the existence of national economies in most of the countries of West Africa, given the fact that the forces supposed to serve as motor for economic expansion are subject to everything but not dynamism. The implementation of the Breton Woods Institutions’ counselled programs with the assaults of globalization upon West African countries and their economies have destroyed the little that was gained after independences that could give any hope of economic building. That is why economies in the region are not able to meet the needs of its population by providing employment to the millions of young eager to for their the better their lives. Unemployment rates in the region are among the highest; those who cannot find their place in the only employing informal sector are choosing the path of the deadly migration roads to Europe, America and Asia.

Regarding to the security concern the Sahel region, which encompasses, many countries of West Africa, is subject to endemic eruptions of violence, terrorism and trafficking. In the region interethnic conflicts, which cause bloodshed and eradication of villages, are recurrent and commonplace. It has been some decade that the terrorism movement led by Al Qaida, Boko Haram and others, has ravaging literally life in the Sahel region. Till now, despite many initiatives and mutual commitments, the countries are not being able to contain these terrorist groups. The groups terrorizing the populations sustain their operations from activities related to trafficking, the trafficking of resources and the levy of illegal taxes.

Thus, in that chaos in all spheres, one cannot not except initiatives such as a project of free movement of people to work as planned.

Striking factors

Under this title of striking factors, factors that are the most patent and hit the most the effectiveness of the regionalism in general and the working of the free movement protocol in particular are discussed.

These factors have more or less to do with political sovereignty, and who talks about sovereignty talks about colonialism and neocolonialism. The non-effectiveness and non-completeness of the rupture of West Africa with colonialism have made neocolonialism flourish in the region. In the institutional setting of national and regional political systems countries have resorted to the same elements they colonial master used to conduct their colonial rule. Up to date, the legislative and institutional regulations in the countries have been characterized by this long-lasting mimicry from political actors.

In addition to the mimicry of institutional framework, the presence of ancient colonial powers and other foreign powers (which were not involved in the colonization of the region) is overwhelming in the policy making of regional concern. For example, EU union is directly or indirectly involved in migration matters in West Africa for its own concerns. Thus, the European organization makes itself invited in the debates, discussions or initiatives organized in the region on behalf of migration and migrants; EU even takes on its own initiatives towards migration in the region and ally to its cause local countries to what it judges of being suitable for European migration policies (Mercator Dialogue on Asylum and Migration – Policy Brief, June 2020).

The reason for this foreign meddling in regional affairs is related to a problem that all African organizations suffer from: self-financing. From the African Union (AU) itself to regional communities, African regroupings are not able to find themselves the policies they adopt to implement. That incapacity is taken as a way-in by foreign actors to attain their goals on the continent. To be sure of that reality concerning the free movement of people project, one has to assess all the concrete measures taken to ensure the implementation; it will come without no surprise a considerable presence of foreign contribution.

Political factors

This category of factors has been chosen to be the last because the causes and the remedies for all the other factories mentioned above are all related to the political factors. By political factors it is intended to talk about all the features of political consciousness which is embedded in the free will of the leading elites to act upon to realize their ideals of society. When examining the leaders of West African countries, one notices a lack of a real political consciousness; therefore, they have no real defined visions and clear ideas on the paths to follow to achieve the intended level of socio-economic development for the region.

For the case of the implementation of the protocols of free movement of people, the political factor is of a crucial one. Though the other factors do undermine the effective implementation of the protocols, their role is not much compared to the paralyzing effects caused by the absence of a bold will from political leaders to reincarnate the vision of African integration that animated the fathers of independences.

Economic Activities and Labor Market in Ecowas

Common characteristics of ECOWAS member countries

In recent indicators of different ECOWAS economies show a level of progress which does not translate into some improvement in the way of life of the citizens. This fact can be explained by the nature of the structures of the economies, from which the growth emerged. A general pattern in the economies is the dominance of the primary and the tertiary sectors in the GDP. West African economies have always been driven by the primary sector, especially the agrarian sector which employs much of the population. Two kinds of agriculture are practiced: the agriculture of subsistence is traditional agriculture that individuals and families practice sustaining their subsistence; for a large part of the population (the rural population), it represents the main source of subsistence or revenue; the industrial agriculture was introduced by colonial enterprise that specialized each country into the production of specific cultures according to their geographical characteristics. The latter form of agriculture is one the main sources of

revenue for ECOWAS economies, at the same time the main means of procuring foreign exchanges, meaning it constitutes the large part of export. The other source of revenue both internally and externally is the bunch of extractive products (oil, gold, iron, bauxite, uranium, etc.).

The commodity-oriented nature of the economies makes them vulnerable to conjunctural fluctuation, thus the need for diversification is being on every tongue. The diversification should go by the putting in place of a substantial industrial base, that is why the ECOWAS has been adopting many policies to facilitate the industrialization of the region.

On the structure of ECOWAS economies Nwokoye, Geraldine and Uzodigwe (2018) provide insightful statistics:

- The agriculture sector represents approximately 36 % of the region's GDP and 60 % of the active labor force. Agricultural exports generate around USD 6 billion annually, or 16.3 % of all products and services exported from the region.
- The share of agriculture in GDP, since 1980s, has declined in countries with high GDP per capita and high growth rate such as Cape Verde, Ghana and Nigeria; and increased during the 1980s in countries like Burkina Faso, Guinea-Bissau, Liberia, Sierra Leone and Togo.
- The Manufacturing sector has underperformed in the region, its share in GDP only increased in 7 of the 15 countries between the 1980s and the 2000s and remains at 23 % on average, for the whole region it declined from 13 % in 1972 to 5 % in 2008.
- Nigeria being the biggest economic player in the region, any evolution of the country's will inevitably impact on the region's trends; thus, with an increase of the share of manufacture from 2.4 % in 2018 to 9 % in 2015 in Nigerian GDP, an increased contribution of non-extractive industries in the region has been observed.
- Besides, the country's share in the region's manufacturing industry had evolved from 5.9 % in 2005 to nearly 9 % in 2015. However, without Nigeria, the region's overall industrial place in the economy decreased from 11.2 % to 8.5 % over the same period.
- In the period 2005-2015, the shares of service and agricultural sectors in GDP respectively increased from 29.3 % to 51.6 % and to 22.6 %.

The point that comes out of the observation is the existence of a non-structured economy in the region. The positive increase in both the primary and the tertiary sectors has not been followed by a positive evolution of the industrial, thus showing the low level of industrialization of the region and therefore its dependency on external markets for manufacture products.

Labor market

An examination of labor migration in the region has to be preceded by an analysis of the state of employment/unemployment, especially of youngsters, in the individual States; for the reason that migration results from the Push-factor of lack of opportunities and jobs in the migrant sending countries, and from the Pull-factor of presence of opportunities and jobs in the migrant receiving countries. In this domain too, unfortunately West African countries do not possess efficient Labor Market Information Systems (LMISs) that can bear witness of the real conditions of labor markets in ECOWAS (Mariama Awumbila et al., *Across Artificial Borders: An assessment of labor migration in the ECOWAS region*, 2014).

The main characteristic of labor in West Africa is its strong informality. In all ECOWAS countries, State employs a minor part of the population, the rest being self-employed and workers for private entities. So that, apart from the few individuals who work for government or are managers in private corporations, the bulk of labor force is labelled with irregularity; irregular workers include self-employed workers, family workers, seasonal or task workers, and temporary workers (Mbaye and

Gueye, 2018). The irregularity comes from the non-compliance of their work to rules of labor, either be national or international. Therefore, though official statistics may consider these irregular workers as employed, thus resulting in the reduction of unemployment rate, job precarity is illustrated by the vulnerability of the many jobs that employ most West African population.

A Comprehensive Analysis

Some analysis can be held in order to comment on the facts that are given in the above sections concerning the ECOWAS; by commenting an attempt is made to explain what may be some possible causes of the current conditions. In order to better appreciate the ECOWAS reality, which is unsatisfactory, the EU is taken as reference for comparison for the EU has the best record of regional integration in the areas of free movement of goods and services, free movement of persons and free movement of capital. Thus, this section tries to provide as comprehensive as possible a treatment of causes about the state of free movement of people and regional integration in the ECOWAS region by having a comparison with the EU.

After exposing the profiles of ECOWAS countries, the state of their labor markets and labor migration in the region, it is time to have these elements in a comprehensive analysis. The matter of free movement enters in the sphere of regional integration, it is therefore linked to the overall condition of the evolution of this latter. To explain the causes of the reality surrounding the free movement of people displayed in the above lines, the journey of regional integration in West Africa can be analyzed by having a comparison between the ECOWAS and the EU. The comparison takes place at many points that concern different contexts.

The foundation context

Let the context of foundation be the first element of analysis between ECOWAS and EU. Relating to the foundation, the number of founding members is a first point. All ECOWAS countries Member states are founding countries of the community; on the opposite, not all the current EU Members were involved in its creation. The early stage of EU was the ECSC, founded in 1952 by six European countries namely France, West Germany, Italy, Belgium, The Netherlands, and Luxemburg. The small number of ECSC founding countries may have played a great role in the success of its treaty: the small is the number of actors involved the less is the degree of disagreement. That was not the case with ECOWAS; the birth of the organization came after a long marathon, as it has been in the chapter 2, the difficulty was related to multiplicity of political ideologies and historical affinities. Meanwhile, a simple declaration of a foreign minister (Schuman) sufficed to trigger the establishment of what would become the most successful form of integration.

The purpose is a second point in the context of foundation. The very name of ECSC tells that it was founded with in mint to achieve a specific goal; hence the main objectives of the Schuman Plan were realistic enough to be reached on time.

So that, the targeted objectives being achieved, the Community had been able to increment on the acquis more ambitious goals, thus has enlarged the treaty to embrace to all fields of the economy and increased number of Member states. The visionary goal of economic integration behind the foundation of ECOWAS, because of its largeness, may be considered unrealistic for countries that had much trouble in getting together.

Early achievements, though small, are symbolic and serve as catalyzers to further realizations which are considerable. This seems to have lacked in ECOWAS, since its establishment the community has a record of a series of postponed implementations, which does not work in favor of galvanizing the members to strive for the progress of the community.

Another point in this first element is the relationship intention-reality. The intention refers to all the provisions of the founding treaty and the reality to the existing condition of countries. Coming back to

the EU, the provisions of the establishing treaty of the ECSC were actually there to work on an industrial machine that was already working; so that, they found terrain for implementation in this latter. For ECOWAS, the primordial goal behind any regional regrouping enterprise, which is facilitating the exchange of goods between its members, was not and is still not backed up by the presence of a working industry in the ECOWAS region.

The historical context

A second element of differentiation between the two Communities is the historical reality defining them. The two regions of Western Europe (the emerging region of the EU) and West Africa have a long-dated relationship. The contact took place centuries ago when the then European kingdoms entered West African territories for the sake of fierce competition among them in exploring land in Americas and elsewhere. It was the time of global expansion through the means of commerce and settlements. In their enterprises, European powers heavily pulled from West Africa millions of men and women to be used as slaves in plantations in Americas. With time passing, they entered the inlands of West African territories with the spirit of colonizing for their resources; this culminated in the separation of territories among them, which separation was officialized by the Berlin Conference. Thus, the once scattered multiple peoples found themselves subjugated to foreign rule. The long-lasting domination has left scars on West African societies with their life being impacted in all its structures. Thence, countries born after independence carried in them configurations and systems that were introduced by the European occupiers. For countries still carrying the scarce of centuries of exploitation and submission to undertake and succeed in fruitful enterprise, either individually or collectively, is not evident. This is best illustrated by the ineffectiveness of West African States in running their countries, and consequently their inability to build effective regional communities. In conclusion, given the historical reality, the legitimacy of the States is questioned: Are West African States, in their current setting, able to deal the challenges facing their countries?

European countries, however, are built on principles that are their own, e.g. the mass of systems governing their countries are products from the inner forces of their societies. The authenticity lacking to West African societies is present in Europe, which enables it to decide effectively about its fate.

The cultural context

Alongside the notable historical element, cultural dimension is another non-negligible point of comparison. The EU community is characterized by a strong cultural homogeneity, which is due to its shared common past. A considerable part of European territories was of the Greek and Roman Empires. The religion of Christianity, starting from the time of Roman Empire, is the main religion in European countries. This means that a strong common ground of principles exists between European countries that renders easy any attempt of cooperation among them.

West African region is home to multiple cultures; moreover, unlike in Europe, no dominant religion exists there are countries mostly populated by Christians, countries mostly populated by Muslims, and countries equally populated by Christians and Muslims. Traditional practices of rituals are also existent in all the countries. Given that religion is serious matter in the life of West Africans, the existence of many cultures and multiple religions may have hindered togetherness in the region. However, a strong caution has to be put here: West Africa being known for religious tolerance, it is difficult to confirm that the multiplicity of religions is an obstacle to integration.

The macroeconomic context

Previous sections in this chapter showed the macro profiles of ECOWAS countries in their economies, populations, and labor markets. There is a connectivity difference between ECOWAS and the EU. ECOWAS countries, despite being geographically bound to one another, are scattered by their profiles. That is why their classification in three groups according to their size is not related to geographical proximity. This is not the case for the EU where economic affinity is linked to geographical ties.

Accordingly, the EU is divided in two groups: on one hand the Western countries, which are the traditional developed countries; on the other hand, the central and eastern countries that lately joined the Community. The distance being an important component of integration, the remoteness of ECOWAS from one another, according to their profiles, may have worked against the acceleration of integration in the region.

A net difference between the two organizations that is critical in bringing about integration is the structure of the economy. A characteristic of ECOWAS economies is their dependency on commodities, another characteristic is the non-connection between sectors of activities. In ECOWAS countries a strong industrial base is absent; on the contrary, Europe was the birthplace of industrial revolution and possesses today an important deal of world industrial plant. EU members have moved from the state of specialized countries in producing specific products to collaborating actors along same value chains: the strength of the Community can be said to lie in this state of complementarity which serves as both the motor and the reason for integration.

Unfortunately, not only industry is lacking in the ECOWAS, but also, they have homogenous economic profiles based on the production of commodities. Thus, ECOWAS countries hold more economic ties with non-ECOWAS countries than themselves.

The next point to naturally follow is the state of labor market. It has been seen that informality reigns in ECOWAS countries' labor markets and that the bulk of jobs employing the working force is made of vulnerable jobs. These factors conjugated together does not favor the movement of people inside the region in seeking better opportunities.

The rope of the analysis followed herein attests of the global nature of matter of free movement of people, this one is shaped within the sphere of regional regrouping, which itself dependent on many factors. At the end, free movement of people comes as a result of a process of integration that starts from the need to strengthen exchanges and flows between countries, given some favoring conditions of different kinds. If the conditions are not favorable in the ECOWAS region, free movement of people is yet to see daylight.

CONCLUSION

The article sheds light on the state of free movement of people in the ECOWAS region. After reviewing the contents of the different protocols adopted by the ECOWAS countries to smoothen the movement of their citizens inside the Community, it has been seen that their implementations have not taken place as planned, they faced many obstacles that are sometimes out of their reach. The need for revolution seems to be ignored; there is sense of an evolvment of Africa from the damages of the past - either be deliberately or unconsciously, the failure to realize that African countries in general are functioning in a delusive reality by the majority of African, especially the leaders, is a serious matter of concern.

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Diplomatic Settlement of Conflicts in the International System: The Cases of Cameroon and Nigeria in the Bakassi Peninsula

Aboubakar KABIROU

PhD Candidate, International Relations, Selçuk University, kabirouaboubakar99@gmail.com,

ORCID: 0000-0002-1620-9066

ABSTRACT

Treaties signed between states are one of the primary sources of international law. According to the Pacta-Sunt-Servanda principle, states must keep their agreements. Conflicts between nations are expected in an anarchic global system due to certain governments' violations of this consensus. A dispute can be resolved peacefully or judicially under international law. For a judicial solution, states must accept court or arbitrator jurisdiction. Article 33 of the United Nations Charter specifies peaceful solutions as diplomacy. 1960, Cameroon and Nigeria gained independence, but their geographical and maritime borders were not defined. This border dispute occurs on the Bakassi Peninsula, a 1000 square kilometer wetland rich in fish and offshore oil crucial to maritime boundary delimitation. The Nigerian government claimed the border existed before the British and German agreements in 1913. For its part, Cameroon claimed the German-British border. The Bakassi conflict escalated in the 1980s and 1990s, and to resolve this disagreement, the two nations initiated discussions through diplomatic and peaceful channels. This started with the visit and meeting of the two Presidents. It also included the deployment of U.N. emissaries and the appointing ambassadors and justice ministers in both countries. After the Greentree deal was signed in 2006 and diplomatic efforts were exhausted, the issue was assigned to the International Court of Justice in The Hague. Based on a 1913 treaty between colonial powers, the International Court of Justice favored Cameroon. The ICJ ordered Nigerian troops to depart the peninsula by August 14, 2008. Following this conclusion, which did not devolve into a regional conflict, the Bakassi issue became a model to be followed and reproduced everywhere when borders are challenged. This article analyzes the diplomatic and judicial settlement of disputes in the international system using International Law, sociology, history, and other related sciences. It focuses specifically on the cases of Cameroon and Nigeria on the Bakassi Peninsula.

Keywords: Diplomatic Settlement, Conflicts, Bakassi, International law, Cameroon, Nigeria.

Règlement diplomatique des conflits dans le système international : Les cas du Cameroun et du Nigeria dans la péninsule de Bakassi

RÉSUMÉ

Les traités signés entre les États sont l'une des principales sources du droit international. Selon le principe du Pacta Sunt Servanda, les États doivent respecter leurs accords. Des conflits entre nations sont attendus dans un système mondial anarchique en raison des violations de ce consensus par certains gouvernements. Un différend peut être résolu pacifiquement ou judiciairement en vertu du droit international. Pour une solution judiciaire, les États doivent accepter la juridiction d'un tribunal ou d'un arbitre. L'article 33 de la Charte des Nations Unies spécifie les solutions pacifiques comme la diplomatie. En 1960, le Cameroun et le Nigeria ont obtenu leur indépendance, mais leurs frontières géographiques et maritimes n'étaient pas définies. Ce différend frontalier se situe sur la péninsule de Bakassi, une zone humide de 1000 kilomètres carrés riche en poissons et en pétrole offshore, cruciale pour la délimitation des frontières maritimes. Le gouvernement nigérian affirmait que la frontière existait avant les accords britannico-allemands de 1913. De son côté, le Cameroun

revendiquait la frontière germano-britannique. Le conflit de Bakassi s'est intensifié dans les années 1980 et 1990, et pour résoudre ce désaccord, les deux nations ont entamé des discussions par des voies diplomatiques et pacifiques. Cela a commencé par la visite et la rencontre des deux présidents. Il a également inclus le déploiement d'émissaires de l'ONU et la nomination d'ambassadeurs et de ministres de la justice dans les deux pays. Après la signature de l'accord de Greentree en 2006 et l'épuisement des efforts diplomatiques, la question a été confiée à la Cour internationale de justice de La Haye. Sur la base d'un traité de 1913 entre les puissances coloniales, la Cour internationale de justice a statué en faveur du Cameroun. La CIJ a ordonné aux troupes nigériennes de quitter la péninsule avant le 14 août 2008. Suite à cette conclusion, qui ne s'est pas transformée en conflit régional, la question de Bakassi est devenue un modèle à suivre et à reproduire partout où les frontières sont contestées. Cet article analyse le règlement diplomatique et judiciaire des différends dans le système international en utilisant le droit international, la sociologie, l'histoire et d'autres sciences connexes. Il se concentre spécifiquement sur les cas du Cameroun et du Nigeria sur la péninsule de Bakassi.

Mots clés: Règlement diplomatique, Conflits, Bakassi, Droit international, Cameroun, Nigeria.

INTRODUCTION

States, the principal and essential international relations and law actors, frequently experience conflicts of interest in an anarchic global system. They regulate their foreign policy because of these conflicts of interest (Akince, 2021). This dispute can arise within the treaty framework between States, sometimes in commercial disputes and most often on the delimitation of border areas. Generally, there are two types of dispute resolution in international law. Alternatives that are both legal and peaceful. The pursuit of peaceful settlements is outlined in Article 33 of the United Nations Charter, with diplomacy as the essential strategy, implying that friendly solutions are equivalent to diplomatic resolutions.

On the other hand, judicial remedies resolve a dispute with judicial bodies created specifically for agreements concluded between States. Indeed, states frequently use diplomatic channels to resolve conflicts before going to international courts. The Cameroon-Nigeria conflict, notably in the context of the Bakassi Peninsula dispute, is an example of this pattern.

Cameroon and Nigeria share a common border, which is 1,700 kilometers long. The land border stretches from Lake Chad in the North to the mouth of the River Akwayafe in the South. Nowadays, Understanding the difficulties associated with this boundary, it is crucial to keep in mind that around the end of the 19th and the beginning of the 20th century, Germany, France, and Great Britain signed several agreements to demarcate the borders of their respective colonial territories (Kamto, 2007). The principles of non-intervention and territorial integrity did not eliminate border wars, but they helped tame their escalation and established mechanisms for finding solutions. The existence of international norms and institutions, notably the International Court of Justice (ICJ), has also been essential for conflict resolution, allowing states with disputes to litigate and arbitrate their claims. International instruments are vital in the conflict resolution repertoire, but their invocation often signifies the breakdown of bilateral and regional mechanisms for resolving these conflicts. The principle of *Pacta Sunt Servanda* is based on the respect by States of the agreements of the international system. However, since states live in an anarchic global system, their interests change over time, giving way to specific problems, such as non-compliance with agreements.

After the independence of Cameroon on January 1, 1960, and that of Nigeria on October 1, 1960, the border between the two countries has yet to be settled and demarcated. This study will treat the peaceful

and judicial methods of resolving disputes in international law and its application in the Bakassi case between Cameroon and Nigeria. Three main questions will direct and guide this study. What are the types of disputes and the different modes of settlement between sovereign states in an anarchic international system? What is the nature of the Bakassi conflict and its impact at the regional and global level? What method is used to resolve this border dispute between Cameroon and Nigeria? After highlighting the theoretical and conceptual framework, this research will initially focus on the different types of conflicts that can oppose two sovereign States. Then, it will look at the two modes of conflict resolution in international law. Finally, before the final remarks, this study will analyze how the two countries have established peace in the Bakassi peninsula thanks to diplomacy and the international judicial apparatus. As former U.N. Secretary-General Ban Ki-moon stated, the Bakassi war's end is "a day of victory for the respect of the law" and an example for Africa to follow in resolving inter-country violence.

Main Actors in The International System

Scholars emphasize how strongly state action is influenced by international law (Janis, 1984). In contemporary civilizations, states retain centralized political power, command the armed forces, and impose laws on people and legal organizations inside their borders. States comprise most of the international community, but today, individuals, non-governmental organizations, multinational corporations, and other entities also play a part in world affairs. It is crucial to remember that complete legal personhood is only explicitly recognized by governments in international law. International organizations have grown in size and significance within the international legal system throughout the 20th century (Schermer, 2011). This change put into question the long-standing legal monopoly of the state.

It is critical to recognize that non-state institutions, such as international organizations and individuals, are inextricably linked to states and do not operate autonomously within the international legal order. Because States create international organizations, define their roles and authority within them, participate in decision-making processes, and carry out decisions. Similarly, states sign accords granting people their fundamental freedoms and rights, and whether or not a person can file a grievance with international authorities depends on their state (Çağiran, 2014). As a result, the foundation of the international legal system is still interstate (Shaw, 2008). In international society, a state's ability to exercise sovereignty, including the freedom to act inside and outside its borders and deny allegiance to a higher power, distinguishes it from others. The international community, which distinguishes it from centralized national societies and emphasizes decentralization, is a horizontal society with equal members and no supreme power because all states are sovereign. Our inquiry will center on the Bakassi war resolution involving Nigeria and Cameroon, which acquired independence in 1960. The issue originated due to the two countries' lack of clear and defined borders upon their independence, which marked the beginning of the Bakassi conflict.

Dispute Resolution Methods in International Law

Dispute resolution in international law refers to resolving conflicts or disagreements related to legal issues (Hutchinson, 2006). Dispute-resolution methods are used in international crime, trade, environment, human rights, and regional agreements. These mechanisms address and resolve issues or incompatibilities that may arise in international treaties (Brack, 2001). Decisions should be contextually appropriate and grounded in laws and rules (Downes, 1999). To guarantee effective dispute resolution, resources must be based on agreements, deadlines must be short, and expenses must be kept low.

Peaceful Resolution Mechanisms in International Law

The obligation of parties to a dispute to seek peaceful resolution through dialogue, mediation, or other peaceful means is outlined in Article 33 of the United Nations Security Council. The Security Council may encourage parties to settle their issues through various channels (Nations, 2023). The article lists other dispute-resolution techniques, including discussion, cooperative actions, mediation, conciliation, study, and investigation (Sands, 1998). The Security Council may also establish a commission of inquiry to determine whether the dispute threatens global peace and security. States can also call conflicts to the Security Council's attention. Even while the Council has the power to take coercive measures, mediation has proven its most effective strategy, earning it the Nobel Peace Prize in 1988 despite peacekeepers not being part of its mandate (Keskin, 1998).

According to the 1907 Hague Conventions, a "friendly enterprise" is a third party, a state or an international organization, negotiating with opposing parties to hurry dispute resolution (Pazarcı, 2009). This third party works as a "friend" attempting to resolve the disagreement, but the disputing parties decide who can accept or reject the offered resolutions. Mediation, on the other hand, is based on the 1907 Hague Convention and involves a third party, frequently a state or international organization, actively participating in negotiations and personally participating in the proceedings (Mengiler, 2006). An example of this is the involvement of the U.N. Secretary-General in conflict resolution, as seen in the Bakassi conflict, where Kofi Annan played a significant role. Negotiation is a customary obligation for states when resolving disputes.

Due to Russia's request, research and investigation, added to The Hague Conventions of 1907, serve three primary purposes: informing decision-making in international organizations, verifying compliance with agreement obligations, and providing crucial data during dispute resolution (Pazarcı, 2009). If these steps fail, parties can bring the dispute to the Security Council, which may recommend alternative peaceful solutions if the conflict threatens peace and security.

Judicial Resolution Mechanisms in International Law

The International Court of Justice (ICJ), established under the United Nations, serves as the U.N.'s primary judicial organ, regulated by Chapter 14 of the UN Charter and based on the Statute of the

Permanent Court of International Justice. All U.N. member states are also parties to the ICJ's Statute. Member states agree to abide by ICJ decisions in disputes they are involved in, with the option to seek Security Council intervention if obligations are not met. However, the ICJ does not prohibit disputes from being settled elsewhere (Akçapar, 1996). An example of international dispute resolution is the 1982 U.N. Convention on the Law of the Sea, offering a mechanism for resolving sea-related disputes. This mechanism encourages negotiations, voluntary reconciliation, and the use of third-party methods, as outlined in Chapter 15 of the convention (Charney, (1996).) Article 284 allows for establishing a non-binding conciliation commission in cases where parties seek conciliation, emphasizing flexibility in dispute resolution within the framework of the convention.

There are several judicial bodies in the European Union (E.U.), including the European Civil Service Court, the Court of First Instance of the European Communities, the Court of Justice of the European Union, and the European Court of Human Rights (Brack, 2001).

General presentation of the Bakassi Peninsula

The Bakassi Peninsula is a 600-square-mile swampland in the Gulf of Guinea, bordered to the west by Nigeria and to the east by Cameroon. It is home to roughly 300,000 people, mostly fishermen and their families, who lack contemporary facilities such as clean water, power, and roads. However, the region is treasured due to the discovery of approximately 10 billion barrels of crude oil in the late 1950s (Anyu, 2007). Ownership of Bakassi had long been a source of contention between Nigeria and Cameroon, which grew worse after the oil discoveries. Bakassi Peninsula is located between the Cross River and Rio del Ray estuaries in the Gulf of Guinea. Based on an International Court of Justice judgment, it was transferred from Nigeria to Cameroon. This transfer sparked debate, with the Nigerian Senate opposing it in 2007. Bakassi was eventually returned to Cameroon on August 14, 2008. It covers around 665 square kilometers and is located from 4°25' to 5°10'N latitude and 8°20' to 9°08'E longitude.

As in well-known fishing towns like Newfoundland and Scandinavia, the local population lives mainly from fishing. Even though Bakassi is frequently referred to as "oil-rich," no economically viable oil resources have been discovered there. Because of its proximity to Nigeria's large reserves, the finding of significant oil deposits in Bakassi has piqued the interest of oil firms, notably China Petroleum & Chemical Corporation.

Queen Victoria signed the Treaty of Protection with the King and Chiefs of Akwa Akpa (Old Calabar) in 1884 during the Scramble for Africa, granting the British Empire sovereignty over the entire Calabar region, including Bakassi. However, the exact border between Nigeria and Cameroon has never been defined. Cameroonian authorities claim Bakassi as Cameroonian territory, relying on colonial-era agreements documented by British and German archives.

Bakassi was still under Nigerian jurisdiction until the International Court of Justice ruling in 2002. Following South Cameroon's decision to secede from Nigeria and join Cameroon, this Court ruled that Bakassi should be subject to Cameroonian sovereignty.

The Bakassi Conflict: A Colonial Legacy

Boundary conflicts in Africa have deep historical roots, dating back to colonial-era practices that divided communities into arbitrary zones. After independence, these conflicts persisted as newly established states sought to assert their sovereignty and eventually developed continental rules through organizations such as the African Union (Khadiagala, 2007). These disputes varied in scale and ferocity and were often due to problems arising from colonial cartography and postcolonial leaders' efforts to create stability within inherited colonial lines (Khadiagala, 1999). The origins of the Bakassi conflict can be traced back to African colonial history when artificial boundaries were established solely for the benefit of colonial masters and their shifting interests.

Treaties established the border between Germany and the United Kingdom in 1893 and 1906. Moreover, the western part of this line was modified in 1913 by the London and Obokum Agreements, which made Bakassi German territory and, consequently, Cameroon. However, after the end of World War I, the Treaty of Versailles led to the partition of all German territories, with some coming under British administration and others under French administration. After World War II, the British and French mandates in Cameroon were replaced by trusteeship arrangements under the United Nations.

Cameroon also shares a long border with Nigeria, originally established by the colonial powers. Nigerian authorities initially accepted the colonial borders in 1980 but later challenged them, leading to a military war. In 1981, a clash occurred in Cameroonian territorial waters near Rio Del Rey. In 1987, Nigerian forces invaded many Cameroonian villages around Lake Chad. On December 21, 1993, Nigerian forces crossed the border into Cameroon at the mouth of the Akwayafe River and took control of Bakassi. Cameroon sought justice at the International Court of Justice in The Hague over the invasion. Cameroon filed a petition on March 29, 1994, which was later strengthened by another petition on June 6, 1994. Because of Nigerian legal claims to several locations on the land border and inhabited villages in the Lake Chad area, these petitions expanded the case to include the entire border between the two nations.

The evolution and process of resolving the Bakassi Peninsula Conflict

Nigeria and Cameroon have strained relations for several years due to disagreements over their shared border. Specifically, the 2,300-kilometre land border stretches from Lake Chad to the Bakassi Peninsula and the maritime border in the Gulf of Guinea. As Lake Chad has dried up due to desertification in northern Nigeria, Chad, Cameroon, and Niger, local populations that rely on the lake for their livelihoods have followed the receding waters and resettled regardless of the national borders that divide the lake (Mashood Issaka, 2008). The origin of the Bakassi dispute lies in the continent's colonial legacy with artificial boundaries based solely on the convenience and changing interests of the colonial powers. The dispute has evolved into three phases in which successive governments still need to resolve the issue.

Phase I tensions increased when General Mohammed's government questioned borders inherited from World War I era treaties. Initially, the Bakassi question merely concerned delineating the ocean boundary

to conform with a 1913 Anglo-German Treaty. Nigerian government began to lay claim to the Bakassi Peninsula by declaring illegal the agreement signed on June 1, 1975, by his predecessor, President Yakubu Gowon, and President Ahmadou Ahidjo of Cameroon.

Phase II of the issue, from 1975 to 2006, includes its metamorphosis into a formal legal dispute. It occasionally escalated into a military conflict, with Nigerian armed forces taking over villages in the Lake Chad region. In turn, this caused the relocation of inhabitants after the 1981 skirmish in Rio Del Rey, the 1987 military attacks in the Lake Chad area, and the Nigerian army's incursion at the mouth of the River Akwayafé in 1993. That year, Cameroon filed a petition with the ICJ to determine the sovereignty of the entire boundary. Eight years later, on October 10, 2002, the ICJ, citing the same agreements of 1913 between Great Britain and Germany, reached various decisions on the issue. Arguably, the most significant of them is the confirmation of the sovereignty of Cameroon over Bakassi. After the judgment, Secretary-General Annan arranged a further meeting between Presidents Paul Biya of Cameroon and Olusegun Obasanjo of Nigeria in Geneva on November 15, 2002, during which both Cameroon and Nigeria agreed to establish the Cameroon-Nigeria Mixed Commission (CNMC). The CNMC would be overseen by the U.N. Office for West Africa (UNOWA) and "consider ways of following up on the ICJ ruling and moving the process forward."

Phase III began in 2006 with the implementation of the ICJ ruling and plans to sign an agreement at Greentree, New York. Presidents Obasanjo and Biya and Secretary-General Annan attended the meeting. Germany, France, the United Kingdom, and the United States came as observers (Pontes, 2002).

The resolution of the Bakassi border is the only comprehensive settlement of a border dispute in Africa. It is also the longest border ever resolved by the U.N., longer than the borders between Kuwait and Iraq, Ethiopia and Eritrea, and East Timor and Indonesia combined. Other African border disputes include Chad-Libya, Namibia-Botswana, Burkina-Faso-Mali, Western Sahara-Algeria-Morocco, and Gabon-Equatorial Guinea. The Bakassi conflict underscores the critical role of leaders in peace processes. It also underscores the importance of regular interactions and consultations between contending states. After the ICJ ruling, further meetings between Nigeria and Cameroon led to three agreements that prepared the final handover:

- 1) The December 16, 2003, agreement on Lake Chad, in which Nigeria lost thirty-three villages. However, as part of a compromise, Cameroon ceded two of these villages to Nigeria;
- 2) The July 14, 2004 agreement on the land border between Lake Chad and the sea; and
- 3) The May 11, 2007 agreement on the final handover of Bakassi, which is considered the most difficult of the agreements due to the presence of significant oil, gas, and fish deposits in the area and the complexity of access to the sea for the Nigerian naval base at Calabar.

The Bakassi Peninsula conflict, a territorial dispute between Nigeria and Cameroon, grew over the twentieth century, aggravated by its strategic and resource-rich location. Following lengthy diplomatic conversations and international mediation attempts, the matter was finally resolved in 2002 with a landmark judgment by the International Court of Justice (ICJ) ruling in favor of Cameroon's sovereignty over Bakassi. Implementing this decision in 2008, with international help and steps to preserve

inhabitants' rights, was an essential step toward peace. Nonetheless, continuous issues in border security, governance, and economic development continue to exist, emphasizing the importance of continuing efforts to guarantee the region's peace and prosperity.

The Greentree Agreement

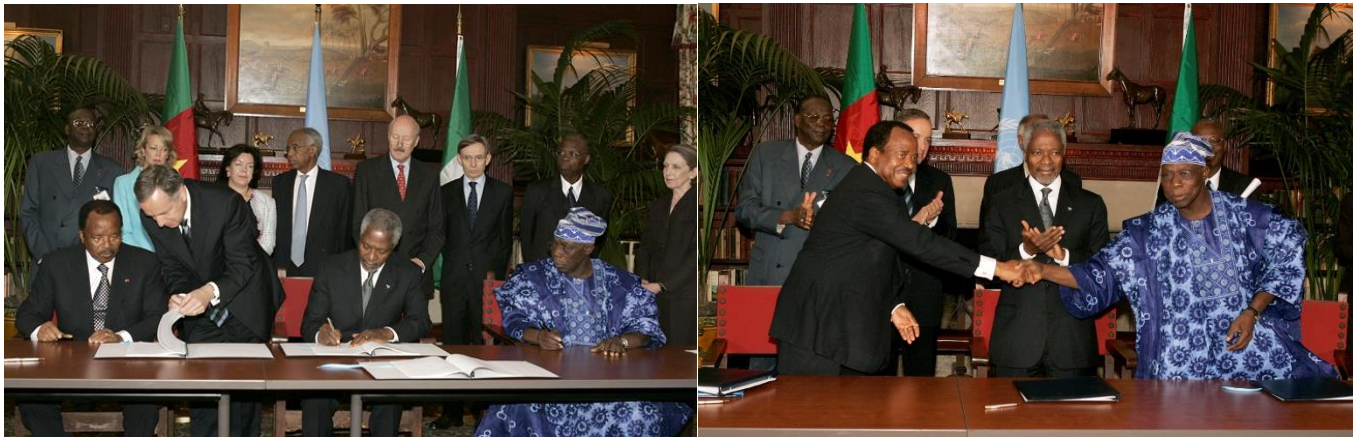
The Greentree Agreement is a treaty between the Republic of Cameroon and the Federal Republic of Nigeria on the withdrawal and transfer of powers in the Bakassi Peninsula. It was signed in 2006 by Nigerian President Olusegun Obasanjo and Cameroonian President Paul Biya to resolve a long-standing border dispute between the two countries. The dispute was primarily over ownership of the Bakassi Peninsula. The Greentree Agreement was named after the Greentree Estate in Manhasset, New York, where negotiations were held under the auspices of the United Nations. The agreement provided a peaceful transfer of the Bakassi Peninsula from Nigeria to Cameroon. Among the main provisions of the agreement were:

1. The Nigerian administration and armed forces withdrew from the Bakassi Peninsula.
2. The establishment of a particular mechanism, the Cameroon-Nigeria Joint Commission (CNMC), to oversee the transfer of authority, resettlement of the population, and other related matters.
3. The commitment to respect the rights and dignity of the affected populations, including the rights of residents to choose their nationality.
4. The resolution of any remaining border issues through peaceful means and cooperation between the two countries.

The Greentree Agreement played a significant role in resolving the border dispute between Cameroon and Nigeria and preventing potential conflict in the region. The United Nations and other international organizations facilitated and monitored the agreement's implementation to ensure its successful execution.

The withdrawal of Nigerian troops was set for 60 days but allowed for a possible 30-day extension. Nigeria was allowed to keep its civil administration and police in Bakassi for another two years. The dispute between the two states was settled by the International Court of Justice, which ruled in favor of Cameroon. The Nigerian government complied and withdrew its troops, motivated by the risk of losing foreign aid (Beth, 2010). A follow-up committee, composed of representatives from Cameroon, Nigeria, the UN, Germany, the US, France, and the U.K., was created to monitor the agreement's implementation. On August 13 2013, the United Nations Security Council said it welcomed the peaceful end two days earlier of the special transitional regime in the Bakassi Peninsula.

Figure 1: Cameroonian President Paul Biya (left) and Nigerian President Olusegun Obasanjo (right) sign an agreement on the Bakassi Peninsula dispute with United Nations Secretary-General Kofi Annan (centre) in Green tree, Long Island, New York, June 12, 2006. (<https://www.un.org/africarenewal/>)



Lessons Learned

One of the most important lessons of the Bakassi case is that it rescued the world community from disaster and highlighted the importance of proactively preventing disputes from turning into conflict. Other essential lessons from the Bakassi dispute resolution were as follows:

- 1) The function of political leadership The most crucial driver of success or failure in peace negotiations is constructive leadership. Preventive diplomacy prior to judgment, tolerance of opposing ideas, and consensus among leaders to focus on relationship normalization are critical preconditions for success in dispute settlement. It was also stated that the ICJ judgment would not have sufficed to end the issue; good leadership reduced tensions and created a favorable environment where the ruling could be implemented.
- 2) The mediators' role should be to seek long-term inclusive solutions rather than fast fixes. In other cases, like Bakassi, the U.N. should maintain its quiet, trustworthy, behind-the-scenes peace-making role, even if it is not involved initially. Former Secretary General Annan developed tight relationships with Presidents Obasanjo and Biya, and being a West African himself, he had greater regional credibility than other world officials. Furthermore, the resources for the Mixed Commission provided the U.N. with the requisite leverage to mediate without impediment. Quiet diplomacy, or the U.N. Secretary General's "good offices" role, is critical for building trust and continuing discussions.
- 3) The importance of handover agreements and monitoring systems stems from their potential to ease the transition during settlement implementation, ensuring a gradual transfer process with minimal negative impacts on residents. While the Joint Cameroon-Nigeria Border Commission, established in the mid-1960s, played an essential role in guiding diplomatic efforts even during periods of violence, both parties were concerned about the potential difficulties in implementing the International Court of Justice (ICJ) ruling in the absence of additional facilitative measures. The Greentree Agreement and the

CNMC established flexible mechanisms for carrying out the judgment, making them extremely important in this context.

4) the rule of law, compliance, and trust building. The Nigeria-Cameroon agreement illustrates the effects of better governance in both nations. The relative advancement of democracy in both countries contributed to a mood of optimism. Both desired to be accepted into the world community and viewed as upholding the rule of law. The widespread broadcast of the ICJ judgment and ongoing attempts within the current Nigerian administration to further normalize bilateral relations have also been beneficial.

5) Time's Function Dispute resolution as a process is need-based, and speed is critical. When the procedure is rushed for expediency, the settlement is frequently jeopardized. Much bloodshed has occurred following the signing of peace treaties, frequently due to poor timing (Wallensteen, 2007). The Bakassi conclusion took a long time to obtain, but dissatisfaction with the conditions could have been greater if the process had not been balanced with patience and careful timing.

6) The disputants' external appearance The Court's decision was also used to encourage a burgeoning culture of peace in Cameroon, Nigeria, and elsewhere. As a regional hegemon, Nigeria's acceptance of a court ruling, such as that of the International Court of Justice, was exemplary in the region and boosted its moral clout.

Conclusion

African boundaries evolved to reflect their historical significance, yet they remain permeable due to ongoing political, social, and economic ties and the risk of state instability. Borders are critical in defining sovereignty and accountability, which might deteriorate due to fragmentation. The Nigeria-Cameroon conflict demonstrates that disagreements can be settled amicably via political will and U.N. mechanisms. This resolution influenced the post-judicial Mixed Commission, legal arbitration, and diplomatic efforts. Finally, the Bakassi pact demonstrates Nigeria and Cameroon's adherence to international law. This accomplishment shows how local and international cooperation may pave the path for realistic and harmonious solutions. Because of their shared history, culture, and geographic proximity, the authorities of both countries understood the importance of preserving good relations. Former Secretary-General Kofi Annan was instrumental in fostering trust and emphasizing the need for mediation in conflict resolution. The Cameroon-Nigeria Mixed Commission (CNMC) efficiently oversaw and executed the International Court of Justice (ICJ) rulings and the Greentree Agreement. As a result of this pledge, the Bakassi area was successfully transferred to Cameroon on August 14, 2008. This transfer process demonstrates the necessity of preventive diplomacy and devotion to the rule of law in such situations. To address geographical concerns honestly, scientific methods, satellite technology, and surveys must be used, especially as borders lose their initial political relevance. The African continent is aggressively tackling the issue of state disintegration due to its potential to spark problems like refugee crises, which can strain and harm adjacent countries. The International Court of Justice

(ICJ) released its final judgment on October 10, 2002, after an eight-year process that comprised the following vital points:

1. The ICJ upheld the boundary demarcation of the Lake Chad Basin Commission (LCBC) and demanded that Nigeria immediately and unconditionally withdraw its administrative presence, armed forces, and police from Cameroon's territory.
2. The International Court of Justice established the border between the two countries from Lake Chad to the Bakassi Peninsula.
3. It established Cameroon's sovereignty over the designated peninsula.
4. Additionally, the ICJ outlined the demarcation of the maritime border between the two countries.

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