

Scientific Conference with International Participation

# FRESKA

Future, Research and Expectations in Science,  
Knowledge, and Aspirations

# БИОНСИС

Будућност, истраживања и очекивања у науци,  
сазнањима и стремљењима

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Banja Luka

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Conference Proceeding



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## INTRODUCTORY LETTER

Dear reader,

these Conference Proceedings contain the scientific work of authors from the third annual Future, Research and Expectations in Science, Knowledge and Aspirations – FRESKA 2024 scientific conference with international participation, intended both for the scientific community to examine and the wider public to read, regardless of their origin. The focus of this year's FRESKA conference is on the limitations, achievements, and future of socio-economic development, specifically regarding the African continent. The papers in these Proceedings are examined through several different aspects: social, economic, ecological, technological, and informatics.

Through exploration of complex issues in contemporary governance, the scientific work presented in these Conference Proceedings deepens and furthers our understanding of the mechanisms which impact all of us in an interconnected world. Authors of the papers have covered phenomena which are important, current, impactful and interesting to the scientific community. Every author has contributed to their scientific field and the wider understanding of science through this Conference, and it is truly our honor and pleasure to have been a part of the creation of these Conference Proceedings.

The FRESKA 2024 Conference was organized by the Independent University Banja Luka along with its Institute for Scientific Research, Bosnia and Herzegovina. The co-organizers of the Conference were the Centre for Sociological and Political Sciences Studies - Institute for African Studies of the Russian Academy of Sciences, Moscow, Russia and the University of the Free State, Bloemfontein, South Africa. The Conference was attended by authors and panelists from Russian Federation, South Africa, Slovenia, Republic of Serbia, the Kingdom of Morocco, and Bosnia and Herzegovina. This diversity in nations and perspectives made the ideas and conclusions of the Conference equally diverse, interesting and useful.

We would like to thank all authors and panelists for their work published in these Conference Proceedings, as well as for their effort and time invested in advancement of knowledge through FRESKA 2024. Additionally, we thank the reviewers and the Scientific Committee for their hard work in assisting the authors, panelists and the Editorial Board in bringing the papers and the Conference Proceedings to their current form. We want to especially thank Professor Hussein Solomon, PhD (University of the Free State), Senior Research Fellow Sergey V. Kostelyanets, PhD (Institute for African Studies, Russian Academy of Sciences), and associate professor Marko Koščak (University in Maribor) for their support. Finally, thank you for reading these Conference Proceedings, and we hope you gain additional understanding from the works within.

Editorial Board of the FRESKA Conference

## UVODNO PISMO

Dragi čitaoc,

ovaj Zbornik radova sadrži naučni rad autora sa treće godišnje naučne konferencije sa međunarodnim učešćem Future, Research and Expectations in Science, Knowledge and Aspirations – FRESKA 2024 (Budućnost, istraživanja i očekivanja u nauci, saznanjima i stremljenjima – BIONSIS 2024), namijenjen i za pregled od strane naučne zajednice i za čitanje šire javnosti, bez obzira na njihovo porijeklo. Akcenat ovogodišnje konferencije FRESKA stavljen je na ograničenja, domete i budućnost društveno-ekonomskog razvoja sa osvrtom na afrički kontinent. Radovi u ovom Zborniku razmatrani su kroz nekoliko različitih aspekata: društveni, ekonomski, ekološki, tehnološki i informatički.

Kroz istraživanje složenih problema u savremenom upravljanju, naučni rad predstavljen u ovom Zborniku radova produbljuje i proširuje naše razumijevanje mehanizama koji utiču na sve nas u međupovezanom svijetu. Autori radova su razmatrali fenomene koji su značajni, aktuelni, uticajni i zanimljivi naučnoj zajednici. Svaki autor je doprinijeo svom naučnom polju i širem razumijevanju nauke kroz ovu konferenciju, te nam je istinski bila čast i zadovoljstvo da budemo dio stvaranja ovog Zbornika radova.

Konferencija FRESKA 2024 je organizovana od strane Nezavisnog univerziteta Banja Luka i njegovog Instituta za naučno-istraživački rad, Bosna i Hercegovina. Suragizatori koferencije bili su Centar za studije socioloških i političkih nauka - Institut za afričke studije Ruske akademije nauka, Moskva, Rusija i Univerzitet slobodne zemlje, Bloemfontein, Republika Južna Afrika. Konferenciji su prisustvovali autori i panelisti iz Ruske Federacije, Republika Južna Afrika, Slovenija, Republike Srbije, Maroka i Bosne i Hercegovine. Ova raznolikost nacija i perspektiva učinila je ideje i zaključke Konferencije podjednako raznolikim, zanimljivim i korisnim.

Želimo da se zahvalimo svim autorima i panelistima za njihova djela objavljena u ovom Zborniku radova, kao i za njihov napor i vrijeme uloženo u naučni napredak kroz konferenciju FRESKA 2024. Takođe, zahvaljujemo se recenzentima i naučnom odboru za njihov trud u pomaganju autorima, panelistima i uredništvu u stvaranju sadašnjeg oblika radova i Zbornika. Posebno želimo da se zahvalimo profesoru doktoru Huseinu Solomonu (Univerzitet slobodne zemlje, Južnoafrička Republika), višem naučnom saradniku Sergeju V. Kosteljanecu (Institut za afričke studije, Ruska akademija nauka i umjetnosti) i vandrednom profesoru Marku Koščaku (Univerzitet u Mariboru, Slovenija) za njihovu podršku. Konačno, hvala Vama na čitanju ovog Zbornika radova, i nadamo se da ćete steći dodatno razumijevanje kroz radove u njemu.

Uredništvo konferencije FRESKA

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PANEL



# The African Union and The Future of African Peace & Security

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**Abstract:** *What is the African Union's (AU's) track record in providing peace and security to the 1.5 billion Africans residing on the continent? The various conflicts plaguing the continent does not bode well for an optimistic assessment. The African Union's seeming inability to act more boldly, assertively and decisively as the ultimate guarantor of African peace and security at this critical juncture- i.e. nearly 20 years since its formal inception-is of grave concern. This is attributable to several critical shortcomings - a few of which will be briefly probed. The article will also provide some preliminary policy proposals on how to fix the African Union's apparent lacklustre track record in providing peace and security to the embattled continent.*

**Keywords:** *African Union, peace, security, early warning, conflict prevention, sanctions*

## Introduction

In 2002, the African Union was formally established. At the time, great expectations were harboured that the new continental body would signal a much-needed radical reset from its predecessor the largely defunct Organization of African Unity (OAU). This year, 2024, is the commemoration of the 20<sup>th</sup> anniversary of arguably the most important body of the AU – the Peace and Security Council (AU PSC), charged with the provision of peace and security. Despite the PSC's establishment, the AU has only achieved modest gains in resolving insecurity and conflicts to date. The coveted goal of sustainable peace remains elusive.

The AU is now less than 6 years away from its self-imposed deadline of “Silencing The Guns in Africa by 2030”. A ‘conflict-free Africa’ however remains a mirage. Agenda 2063’s aspiration of a peaceful and secure Africa could remain unfulfilled unless radical steps are taken to reverse the chaos and carnage that is currently being inflicted in virtually every region of the continent. The AU’s seemingly ground-breaking normative shift from non-interference towards that of ‘non-indifference’ has been tepid and weak at best. This purported historic shift by the AU has proven

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wholly unsatisfactory as a response for a continent that is under near-constant siege. Large swathes of Africa remain gripped in destructive conflict, while more states, once untouched by the ravages of war face the spectre of being destabilized by rogue elements, rebels, extremists, insurgents and illegitimate leaders pursuing destructive agendas at the expense of innocent civilians. The very foundations of the much vaunted AU Peace and Security Architecture (APSA) is buckling under pressure and several of its core institutions charged with the provision of peace and security are increasingly struggling to stem the tide of this onslaught. This article serves as an early warning: the AU needs to initiate the full reform of APSA or face the onset of more conflict situations that could incapacitate its already overstretched Peace and Security Council.

The AU and its Peace and Security Council is largely delivering a vanquished, imperfect, and unstable peace to the continent. This has created permissive conditions in which a swift return to conflict has frequently become the norm in several African states. Large swathes of the continent remain engulfed in conflict. The AU has struggled considerably to prevent crisis situations that have wreaked havoc in virtually every single expanse of the continent. These have manifested and have taken on various permutations. In some (if not all) cases the AU has been found wanting. This article seeks to provide a critical reflection of the AU's track record in delivering peace and security to the African continent to date. It will briefly outline some of the most pressing shortcomings that has crippled the AU in responding to peace and security challenges.

In its defence, it should be noted that the AU has undertaken considerable introspection of its own, most notably through its annual assessment of the state of peace and security in Africa.

### **The Current Dire State of Peace and Security in Africa**

The AU stands at a difficult crossroads. The overall peace and security situation remains dire in far too many of its member states. On the 20<sup>th</sup> Anniversary of the PSC there is very little cause for celebration. During his presentation of *'the Report of the State of Peace and Security on the Continent'* to the AU Assembly in 2022, the Commissioner for Political Affairs Peace and Security Ambassador Bankole Adeoye ominously observed that:

*"Africa is now contending with unprecedented, persistent and emerging threats, which impact on the very existence, sovereignty, territorial integrity, political unity and survival of member-states of our dear union. Without a shadow of doubt, the clearly identified multiplication of principal threats to peace, security and stability are: (1) Terrorism, Violent Extremism and Radicalisation; (2) Upsurge of Unconstitutional Changes of Government, evident by the latest attempted coup d'état in Guinea Bissau; and (3) Complex political transitions. Coupled with these threats, is the public health security challenge posed by the COVID-19 pandemic as well as climate induced insecurity."* (Adeoye, 2022).

The deteriorating peace and security African context have been adversely affected by the continuation of existing conflicts in the DRC, as well as the expansion and escalation of conflicts in Somalia and Sudan (Amani Africa, 2022). The increase and geographic expansion of conflicts has also been attributed to the eruption of violence involving terrorist groups or civil conflicts such as witnessed in Burkina

Faso, Ethiopia and Mozambique. As a consequence, the humanitarian crisis has developed into a full-blown catastrophe. This is evidence in the number of internally displaced and refugees and severe food insecurity.

The threat of terrorism and radical extremism has now affected all five regions of the continent. As Ambassador Adeoye noted – countries previously thought unaffected by terrorism has also proven to be vulnerable to this scourge (Adeoye, 2022). In its latest reflection on the state of peace and security the AU Assembly acknowledged that ‘Terrorism and Violent Extremism were among the primary threats to peace, security, national stability, national cohesion, territorial integrity, and development on the continent during 2023.’ (AU Assembly, 2024).

Increasingly, the AU has had to come to terms with its on inadequacy. In June 2024 there was an acknowledgement by Dr Alhaji Bah (Director, Conflict Management Directorate) that the previous year was marked by complex and persistent security dilemmas. In this regard both the African Governance Architecture (AGA) and the African Peace and Security Architecture (APSA) have endured considerable pressure. Additionally, the pressing task of civilian protection also encountered notable obstacles (Bah, 2024). A less diplomatic way of phrasing this would be the current continental peace and security architecture represented by the AU and its Regional Economic Communities (RECs) have been overstretched, under-resourced and not fit for purpose thereby undermining human security.

Dr Bah, the AU’s Director of Conflict Management also expressed deep concern over the phenomenon of democratic backsliding characterized by Unconstitutional Changes of Government (UCG). The poor state of civil-military relations was witnessed by the plague of coups which has wracked West Africa and the Sudan. This resulted in the AU’s suspension of six Member States, Burkina Faso, Gabon, Guinea, Mali, Niger and Sudan) the most significant number in the history of the Union (Bah, 2024).

The PSC’s zero tolerance policy towards coups appears to be losing its desired effect. Several African militaries have acted with absolute impunity in their execution of unconstitutional changes of government. The anti-coup norm appears to have lost its deterrent effect. The erosion of the zero tolerance policy against UCGs is said to have commenced as early as 2021. A departure from this principle occurred with significant consequences when the PSC failed to categorize the military takeover in Chad in April 2021 as an unconstitutional change of government (Amani Africa, 2024). The PSC’s failure to act against Chad set a bad precedent. The AU norm against coups was effectively rendered weaker. This could provide would-be coup plotters with permissive conditions to undertake military interference in their own states. Whilst proper civil-military relations is a cornerstone of democracy, the truth is that the AU ignores the fact that in many African countries, elections often are a sham or a democratically elected government acts in an autocratic manner and is often corrupt. Many of the coup leaders in these countries were therefore widely welcomed by long-suffering citizens.

Central Africa and the Great Lakes region continues to suffer unrelenting insecurity, notably the eastern Democratic Republic of Congo (DRC). Concerns have mounted over the potential of renewed full-scale violence linked to the failure to implement several peace agreements (Bah, 2024). The re-emergence of the M23 in eastern DRC, with the active support of Uganda and Rwanda according to the UN

has not only worsened the humanitarian plight but has also highlighted the inadequacy of African responses. As the AU is dependent on national armies to provide troops for missions, their failures translates into failures of the intervening force. A case in point is South Africa which is the largest troop contributor to the SADC mission in the DRC – SAMIDRC. Its own overstretched and under-resourced armed forces have seen SANDF troops coming home in body bags after M23 rebels have repeatedly attacked its positions. Consequently, public opinion in South Africa for the DRC mission has dwindled.

The grave security threat posed by the jihadist insurgency in Cabo Delgado in Mozambique represented the gravest security threat Southern Africa has had to confront to date. The possible expansion of the threat to neighbouring SADC states should not be ignored or underestimated, despite SADC and Rwandan military intervention. The Rwandan intervention also contradicts the AU's existing peace and security architecture based on the RECs since Rwanda is not part of SADC and should not have been there according to the AU approach to conflicts. Rwanda's involvement is a tacit acceptance that RECs are not working, but what is really needed is a complete overhaul of the entire peace and security system which neither the AU nor individual states seem to desire. As such we move from crisis to crisis.

North Africa has had to contend with the fallout from terrorism in the Sahel. The potential threat posed by the growing activities of transnational organised criminal networks has also been cited as one of grave concern. Egypt continues to face the threat of terrorism from the Sinai Peninsula, while Libya remains threatened with instability and insecurity since the fall of Muammar Gaddafi's regime. Following a decade of civil war, the country has remained crippled by deadly political stalemate between rival political factions. Meanwhile, the issue of the Saharawi and the Polisario Front lingers on, a source of tension between Algeria and Morocco which has rendered the farce of a REC for North Africa unworkable.

The ongoing crises in several African states begs the question whether the AU Peace and Security Council is genuinely able to uphold peace and security. At present the security governance infrastructure of the PSC appears severely constrained.

### **Still Fit for Purpose? A Critical Assessment of The AU Peace and Security Council**

In 2024, the AU Peace and Security Council (PSC) celebrated its 20<sup>th</sup> Anniversary since its formal establishment in 2004. This represented a critically important moment to audit the efficacy of this body vis-a-vis its strengths and weaknesses in addressing peace and security challenges.

In a recent interview Ambassador Adeoye noted that:

*“the PSC is living up to its purpose, mandate and expectations of citizens and member states. Despite challenges, it has remained steadfast and formidable as the continent's first responder in addressing peace, security, governance and, to an extent, sustainable development.”* (Adeoye, 2024).

Many will however disagree with the Ambassador's assessment. The PSC appears overwhelmed by its current peace and security role. It has had to contend with several complex crises simultaneously. The body has not succeeded in securing sustainable peace, security or any semblance of a genuine return to order in any

of the crisis situations it has been engaged in. A cynical observer could well point out that the AU's interventions itself has made the situation worse. A case in point is the AU's responses to the recent spate of coups in the region. In response, the PSC has turned to sanctions – more specifically activating its sub-committee on sanctions (AU Assembly, 2024). Surprisingly this Sub-Committee had never been fully operationalized before. But sanctions and suspensions are counterproductive. Sanctions only hurt ordinary people as was the case in Nigeria and ECOWAS blockade of Niger and suspensions only serve to harden the resolve of coups leaders against regional blocs and the continental body. On 6 July 2024, Burkina Faso, Mali and Niger formally constituted themselves as the Alliance of Sahel States and chose to opt out of ECOWAS.

The antipathy with which both ECOWAS and the AU responded to both the coups and the formation of the Alliance of Sahel States have suggested that there is more at work here than issues of peace and security. After all, the civilian governments which the coup leaders overthrew did not have sterling reputations as paragons of good governance. Some commentators have suggested that because these coup leaders are anti-West and pro-Russian has resulted in the West using the AU to undermine these countries and their nascent confederation. How could the AU advance Western interests in this way whilst undermining African peace and security prospects? In his recent book Prof Jude Cocodia examines the AU's intervention in Somalia. Cocodia also points out that given the parlous state of the African Union (AU), finances, the continental body reflects more its donor or foreign (Western) interests than African interests. AU intervention in Somalia therefore reflect global norms of intervention and peace-making and state-building as opposed to African and Somali interests. The AU intervention in Somalia, whilst dressed up as a peace intervention was actually an intervention at regime change, ensuring that the Islamic Courts Union was ejected from power. In the ensuing power vacuum, conflict has claimed thousands of Somali lives, maimed others and have ensured decades of conflict (Cocodia, 2024).

### ***Inculcating a Responsibility to Prevent: Addressing the Early Warning Deficit***

Overall the AU has failed dismally in its conflict prevention mandate. One of the key objectives of the PSC Protocol is the anticipation and prevention of conflicts, as stipulated in Article 3 of the Protocol. Article 2(1) of the Protocol envisages that the Council shall be 'a collective security and early warning arrangement to facilitate timely and efficient response to conflict and crisis situations in Africa.' It is tasked with initiating early response to contain crisis situations, thereby preventing them from escalating into full-blown conflicts (African Union, 2003). Early warning and preventive diplomacy efforts have not yielded desired results. Early preventive action has been sorely lacking in far too many instances. The AU has adopted a reactive as opposed to a preventive posture on critical threats to continental peace and security. Restoring diplomacy as the primary instrument of peace and security is deemed as an urgent priority if the PSC is to remain relevant. The body is repeatedly overtaken by events on the ground. The major Achilles Heel is the glaring absence of robust early warning.



Unlike its predecessor, the new Political Affairs, Peace and Security (PAPS) department “*lacks a dedicated division for conflict prevention and early warning, marking a significant institutional regression in the conflict prevention mandate*” (Amani Africa, 2024). With the CEWS structure removed, early warning and governance monitoring are ‘mainstreamed’ into the regional desks. This has deprived CEWS of a dedicated structure housing and responsible for it. The ‘Situation Room’ now serves PAPS in its entirety rather than being part of the conflict prevention directorate (Amani Africa, 2024). The successful development of rigorous, robust early warning reports has also been difficult and challenging.

The PSC Communique of the 1208<sup>th</sup> session in particular: “*Underscores the imperative of a robust and fully functional Continental Early Warning System (CEWS) to effectively pre-empt and mitigate conflicts and calls for further enhanced inter-agency collaboration, technological advancement, capacity building, and increased political engagement and advocacy aimed at fostering a cohesive CEWS*” (Peace and Security Council, 2024b).

Early warning without an integrated action plan which is implementable will further the AU’s credibility crisis. A credibility crisis arises from the gap between promise and performance.

### ***A Consistent Lack of Implementation***

The lack of follow up and implementation has become so much the norm, that the AU itself is expressing unhappiness on the matters. Addressing the 37th Ordinary Session of the Assembly on 17 February 2024, Moussa Faki Mahamat, the AU Chairperson the Chairperson of the AU Commission, public lamented about, “*the frantic tendency to make decisions without real political will to implement them, has grown to such an extent that it has become devastating to the AU’s individual and collective credibility*” (Mahamat, 2024a). He further pointed out that over the past three years, 93% of decisions taken were never implemented (Amani Africa, 2024).

To ensure timely implementation, the PSC mandated its Committee of Experts to develop a ‘matrix on the status of implementation of council decisions that include an impact assessment.’ (Amani Africa, 2024). Whilst an audit of implementation of decisions is important, perhaps more importantly is the capacity to implement. The African Standby Force (ASF), for instance, is little more than a paper tiger as it has to be still fully operationalized. A telling statistic is that since the ASF was nominally established, the AU via its RECs, has embarked on 27 peace operations – but none of these have made use of the ASF arrangements (De Coming & Yaw Tchie, 2024).

Despite having been declared operational since 2015, the PSC has not yet initiated official deployment of the ASF. Many of the peace operations deployed over the past 20 years were initiated or led by the eight RECs/RMs or by groups of member states that formed a coalition of the willing (De Coning & Yaw Tchie, 2024).

Another challenge for implementation is the relationship between the AU and the RECs in the peace and security realm. According to Amani Africa’s Special Research Report, the AU/PSC-RECs relationship is “*fraught with various issues that have stifled effective policy coordination and deployment of collective and joint action*” to proactively and meaningfully address peace and security challenges in the continent (Amani Africa, 2024). There are several instances where RECs have shown limited interest in engaging substantively with the PSC on critical issues, such as

military deployments and mediation efforts, resulting in policy divergence and competition. A notable example is the discord between ECOWAS and the PSC regarding the appropriate strategy to address the military coup in Niger in July 2023. SADC's military deployments in Mozambique in 2021 and the DRC in 2024 were brought to the attention of the PSC for endorsement without substantive prior engagement on the deployments (Amani Africa, 2024). To be clear, this issue is more than just an issue of co-ordination between regional organizations and the continental body, it is fundamentally also about the values the organizations represent and the interests being promoted.

Another challenge to implementation is the lack of funding and the AU's dependence on donor funding. The AU has attempted to revitalize its Peace Fund. In July 2016, the AU Assembly of Heads of State and Government decided to endow the Peace Fund with \$400 million in Member State contributions. Since 2017, the Fund has received the highest levels of Member State contributions since the establishment of the Fund in 1993 (Onanga-Anyanga, 2024). In 2023, \$6.5 million had been disbursed from the Crisis Reserve Facility of the Peace Fund, marking a milestone in the operationalization of the Peace Fund (Amani Africa, 2024). Whilst this is a small amount relative to the size of the challenge, these are positive steps in the right direction. Another positive development is the adoption of UNSC Resolution 2719 (2023) on financing of African Union-mandated/led Peace Support Operations (PSOs) (AU Assembly, 2024). This will also assist the AU towards greater financial independence from foreign donors and their agendas.

## **Conclusion**

Africa remains wracked by conflict. The AU and its prevailing peace and security architecture has failed 1.5 billion Africans. At its core, the AU is an inter-state body and as such reflects the weaknesses of its member-states. Weak national armies, for instance, result in weak collective armed interventions where needed. The failed SADC intervention in the DRC highlights this truism. Limited financial resources mean dependence on foreign donors with their respective agendas at play. ECOWAS' handling of the crisis in Niger reflects a pro-Western stance of the regional body. This goes to the heart of the question of what common values binds a regional body or the continental body. What values lie at the core of their leadership. Here it is imperative that leaders rise above the global divide of West vs East and articulate African interests. African need to stop being pawns in the hands of foreign interests. It is time to put Africa first. This would take skilled and nuanced policies and leaders of the greatest integrity. Sadly, the latter is in short supply. Issues of a technical nature such as the coordination between the RECs and the PSC as well as the pressing need for a more effective early warning system which is better integrated with an effective response system given the moribund nature of ASF of course are equally important if a more peaceful Africa is to be realized.

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# Africa in the 21st Century: Prospects and Challenges

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**Abstract:** *The world is increasingly looking at Africa as a land of opportunity and even the “continent of the future”. This has particularly manifested itself in the skyrocketing interest in the continent demonstrated by most leading world powers. One marker of this interest is summit diplomacy. In June 2024, South Korea held its first summit with Africa; in November 2023 there took place the maiden Saudi Arabia-Africa summit. France, Japan, China lead in terms of the number of summits with Africa, while India, Turkey, Russia and the US are eager to catch up. The neocolonial system of exploitation by external powers is rapidly falling apart, with African countries assuming their rightful place of equal political partners rather than subordinate parties. The rise of Africa is driven above all by its economic and demographic growth, which is set to add hundreds of billions of dollars each year to the size of its GDP, which in 2023 surpassed 2.5 trillion USD. In 2050, a quarter of global population will live in Africa, which will account for about 60% of the global population growth. This rise has among other things been facilitated by the deepening political and economic integration of the continent both on the regional and increasingly on the continental level. Economic development is accompanied with noticeable cultural progress, the spread of the Afrocentric vision of the history of Africa, and a steady decolonization of the continent’s science and education spheres. Indeed, Africa still faces many challenges, among them armed conflicts, terrorism, poverty, diseases, infrastructure deficiencies and unsolicited meddling by foreign powers. However, the immense potential of Africa in terms of its human and natural resources, cultural heritage and scientific and technological achievements coupled with its integration agenda is bound to make the African Union an important pole in a multipolar world.*

**Keywords:** *Africa, neocolonialism, sovereignty, economic development, science*

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## **Introduction**

From the 1980s and to the present day the world has gone through at least three rounds of change of the prevailing world order: the collapse of the bipolar world system, the establishment of monopolarity with the undisputed dominance of the United States, and now the seemingly inevitable emergence of a bipolar or multipolar system. Indeed, there still exists no exact understanding of the structure and real prospects of the latter. Thus the current stage of the formation of the world order is characterized by a high degree of uncertainty and variability.

At the same time, the position of one of the largest segments of the world both in terms of territory and population – Africa – has not fundamentally changed throughout the aforementioned rounds of geopolitical renewal. Yet there took place innumerable quantitative changes and emerged rudiments of Africa's agency, which were interpreted by many as harbingers of impending qualitative changes. The world is now increasingly looking at Africa as a land of opportunity and even the "continent of the future". This has particularly manifested itself in the skyrocketing interest in the continent demonstrated by most leading world powers. One marker of this interest is summit diplomacy. In June 2024, South Korea held its first summit with Africa; in November 2023 there took place the maiden Saudi Arabia-Africa summit. France, Japan, China lead in terms of the number of summits with Africa, while India, Turkey, Russia and the US are eager to catch up. There have also been summits of Africa with the EU and with Arab states (Ragazzi, 2022).

Employing systemic analysis, the present author shall investigate both the key factors of Africa's strategic significance and the major barriers that Africa faces on its path toward becoming an important and sovereign pole in a multipolar world.

## **The economic surge of Africa**

The rise of Africa is driven above all by its economic and demographic growth, which is set to add hundreds of billions of dollars each year to the size of its GDP, which in 2023 surpassed 2.5 trillion USD. According to a forecast by the World Bank, in the next decade the continent's economic growth rates will significantly exceed that of the world on average. For instance, real GDP growth for the continent is expected to average 3.8% and 4.2% in 2024 and 2025, respectively. This is higher than projected global averages of 2.9% and 3.2%. The continent is set to remain the second-fastest-growing region after Asia (AfDB, 2024). By 2030, the GDP of the largest African economy – Nigeria – will have surpassed 1 trillion USD, while the continent's aggregate GDP will have reached 4.6 trillion USD (Allianz Research, 2023).

This growth among other things will have been facilitated by deepening political and economic integration of the continent both on the regional and increasingly on the continental level. In this regard, the inauguration of the African Continental Free Trade Area (AfCFTA) in 2021 presents a major milestone in modern African history. The implementation of the AfCFTA is projected to have the effect of increasing average incomes in Africa by 7 percent by 2035 and the volume of investment – by 2% (Echandi et al., 2022).

In 2050, 26% of global population, or almost 2,5 billion people, will live in Africa, an increase of 1,1 billion people from the 2024 figure, which will constitute 60% of the global population growth over this period of 25 years. 50% of the global popu-

lation growth until 2050 will occur in sub-Saharan Africa and 10% – in Northern Africa. Informatively, already by 2040 the number of people of the most productive age – 15 to 64 – in Africa will have exceeded the corresponding figure for Europe, Latin America, and Australia and Oceania combined. Nigeria is forecast to become the world's third-most-populous country in 2050 (United Nations, 2022).

Furthermore, according to the forecasts made by leading scholars of Africa, by the 2030 Africa will have become the most important global strategic reserve of raw materials necessary for the Next Production Revolution. These materials have no analogues and are vital for the development of innovative technologies in the 21st century, including of defense technologies. For instance, Africa is home to 25-90% of the global reserves of such critical materials as platinum, cobalt, manganese, chromium and bauxite (Abramova, 2021).

### **The hurdle of neocolonialism**

Economic development of Africa is accompanied with noticeable cultural progress, the spread of the Afrocentric vision of the history of the continent, and a steady development of its science and education spheres. The immense potential of Africa in terms of its human and natural resources, cultural heritage and scientific and technological achievements coupled with its integration agenda is bound to make the African Union an important pole in a multipolar world.

However, Africa still faces many challenges, among them armed conflicts, terrorism, poverty, diseases, climate change and infrastructure deficiencies. Most critically, despite the obvious successes in strengthening sovereignty, national statehood and economic potential, Africa has not attained real independence or agency. We may witness this in many areas but especially when assessing the degree of the continent's influence on world politics, international economic relations, global science and technological development. The neocolonial system of exploitation by external powers is gradually falling apart, with African countries striving to assume their rightful place of equal political partners rather than subordinate parties, but many of its vestiges remain in place.

For Africa, the persistence of colonialism in the form of neocolonialism is a fundamental, basic obstacle to the development in all spheres. Neocolonialism permeates political and economic relations, development of science and technology, digital and media sphere, climate change agenda and responses to pandemics, etc.

Many of the problems Africa is currently facing are the result of foreign interference, both colonial and post-colonial. The use of direct force during the colonial times, such as the suppression by the French of popular uprisings in Madagascar, Tunisia, and Cameroon and their war in Algeria, or the massacre of the Mau Mau uprising in Kenya by the British, in the course of controlled decolonization were replaced by indirect means of control facilitated by African regimes that were willing to serve Western interests. The anti-people nature of many African post-colonial regimes, coupled with the unnatural borders inherited from the colonial system, soon made Africa the “continent of conflicts” (Abramova, 2023).

Foreign political and military interference in newly independent states was making wars on the continent ever more deadly and prolonged. Massive supply of weapons both by the Western alliance and the Soviet bloc was intended to bolster proxy regimes, but resulted in permanent instability on large swathes of African territory.



Upon the end of the Cold War, as leading global powers cut down on financial and military support of their African clients, political destabilization engulfed many of them and in some places continues to this day.

Since the start of the War on Terror in the 2000s, foreign military presence in Africa has been on the rise again, further invigorated in the 2010s by the escalation of geopolitical tensions between the West and Russia (Okeke & Kostelyanets, 2018), in the 2020s between the US and China, and by the growing involvement on the continent of new actors – the UAE, Turkey, Iran and others, whose activities to one extent or another undermine Africa's agency in world affairs and ability to solve its own problems (Denisova & Kostelyanets, 2023).

Perhaps, less visible but no less important are the manifestations of economic neocolonialism and also of a lingering coloniality in the areas of science and technology. Africa's forcible insertion into the global capitalist system under conditions of colonial plunder and unequal specialization has meant that the continent does not produce what it consumes and does not consume what it produces, and also development in one sector of disarticulated African economy rarely stimulates development in another sector (Taylor, 2021).

Also, contrary to what is commonly perceived, it is not the developed world that supplies capital to Africa, but vice versa. The key to economic neocolonialism is the problem of unequal exchange, whereby Africa is drained of surplus value. Essentially, due to inequality in wages, continents exports goods that are relatively undervalued, while those it imports from the developed world are overvalued, constituting the phenomenon of unequal exchange that seemingly perpetuates Africa's subordinate position in the global economy (Taylor, 2021). To put it in other words, for every unit of labor and resources that Africa imports from the West, Africans have to export many more units to compensate for the expense .

Moreover, taking advantage of three factors – the overexploitation of labor, price manipulation and the “imperialist rent” ensuing from the control of key commodity markets, foreign powers continue to appropriate surplus value from African nations in the form of vast corporate profits. Throughout the 2000s, foreign entities repatriated profits valued at over 80% of yearly foreign direct investment in Africa, or over 30 billion dollars annually.

Setting aside the vast amounts drained from Africa through unequal exchange and the legal repatriation of profits by foreign investors, the continent loses huge sums in illicit financial outflows as multinational companies (primarily from the West) and their allies in African governments involve themselves in fraudulent schemes to avoid tax payments. For instance, in the 2000s Africa was losing over \$50 billion a year through illicit financial flows (IFFs). The latest figure from UNCTAD for 2023 is 88.6 billion dollars per year in IFFs, or 3.7% of the continent's GDP. Since 1980, it has been estimated that about 1.5 trillion dollars has left only sub-Saharan Africa in the form of IFFs. Major transnational corporations account for the majority (65%) of IFFs, followed by organized crime (30%) and owners of illegal assets (5%). If these illegal financial transactions had been restricted, the continent's capital resources would have increased by 60% and per capita GDP by 15% just over the 2010s (OSAA, 2022). In essence, IFFs constitute a direct seizure of resources that could have been channeled towards economic development. This extraction of capital from the continent by both legal (unequal exchange and profit repatriation)

and illegal (IFFs) means helps explain why Africa remains underdeveloped even in those areas that are endowed with resources and human capital.

### **The challenge of scientific and technological dependence**

In addition to the aforementioned aspects of neocolonialism, of fundamental importance to the development of the continent is the persistent neocolonialism in the fields of science and technology. Such problems in African science as the lack of funding and personnel and the “brain drain” are essentially the derivatives of the scientific neocolonialism that dominates the global science. Ultimately, the production and distribution of the results of scientific research are carried out within the framework of neocolonial relations according to the rules of the game set and maintained by the West. The West exerts control over mechanisms of financing and organization of science, regulates the international flows of intellectual capital, regulates and evaluates publishing activity, etc. (Fituni, 2022). As a result, the West maintains a monopoly on knowledge and conserves essentially colonial relations in the field of science.

According to the African Academy of Sciences, perhaps the greatest impediment in terms of scientific productivity of African scholars is the so-called “tyranny of the impact factor” (Marincola & Kariuki, 2020). Essentially, within this model of tyranny, the value of scientific work is determined not by its content, but by the ranking of the journal in which it is published. Consequently, authors are forced to send their results to the most “prestigious” journals which are, as a rule, Western ones. These journals, whose portfolios are practically always full, effectively control directions of research. As a result, African scientific papers, of which there are not many to begin with (Africa is home to 18.3% of the world’s population, but the continent produces just over 1% of all types of scientific output on the planet, including publications), are indexed significantly less frequently in such databases as Scopus and Web of Science. On the other hand, in recent years there has been a noticeable trend towards an increase in publications in “quality” journals by African authors in collaboration with Western scholars. Overall, one may speak of continuing insignificance of the contribution of African authors to the total number of indexed publications in the world amid rising dependence on American and European coauthors. In most cases, cutting-edge and breakthrough research in Africa, which has emerged in recent years, is carried out under the guidance and funding of foreign partners. African partners typically play the subordinate role within international collaborations, and local laboratories *de facto* turn into foreign branches of Western scientific centers. While these local laboratories may work on the edge of science and with most advanced equipment, they produce results that are not solicited by Africa’s national economies but benefit Western ones. In those areas where research is able to generate benefits for the home country (epidemics, natural disasters management, biological threats, etc), its application is not always possible because research findings become the intellectual property of the Western partner (Fituni, 2022).

Over the recent decades, efforts have intensified to develop optimal approaches and solutions to stimulate the development of science, technology and innovation in the countries of the continent. To a certain extent, these collective efforts are called upon to counterbalance the phenomenon of neocolonialism in science, however, so far, they have not been effective enough. To a large extent, they take the form of de-

veloping and declaring various government strategies to stimulate African science. These have contributed to a considerable increase in allocations for national science and an increase in the number of scientific and technical personnel, but did not lead to qualitative changes in Africa's position in world science.

## Conclusion

The incomplete agency of Africa in the modern world order is manifested in the fact that its resources – natural, human and intellectual – are still being exploited by the West in the framework of the neocolonial system of relations, which constitutes a major challenge to the continent's development prospects. In general, despite the abovementioned problems and limitations, countries of the African continent are part of the global development vector toward the ever-greater practical use of the achievements of science, technology and innovation in the interests of national development. Indeed, quantitatively, the African continent is bound to grow in importance politically, economically and scientifically, yet a qualitative leap, which would entail a noticeable improvement in quality of life of all Africans, requires above all tremendous political will on part of national governments in Africa that are so used to focusing on solving day-to-day problems rather than on thoughtful long-term planning. Raising popular awareness of these challenges and the ensuing public support are the other critical ingredient in overcoming the hurdles of neocolonialism.

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# Challenges for Sustainable Tourism Development

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**Summary:** *Tourism has rebounded strongly following sharp declines triggered by the COVID-19 pandemic that led tourism flows to plummet in 2020-21, following six decades of consistent growth. Tourism's direct contribution to GDP had recovered to 3.9% in 2022 in OECD countries with available data, half a percentage point below 2019 levels, and the evidence suggests that the recovery has continued since. The return of international tourism demand following the lifting of travel restrictions has been a significant driver of this recovery, with tourism's share of services exports growing to 14.8% in 2022 in OECD countries. Although this was still 5.6 percentage points below pre-pandemic shares, international tourist arrivals have continued to strengthen and already exceeded pre-pandemic levels in some OECD countries in 2023. A full global recovery is projected by the end of 2024, buoyed by positive traveller and business sentiment, and pick up in travel in Asia Pacific, including from China, with growth anticipated to return to pre-pandemic trends as demand and supply imbalances continue to unwind. However, recovery is uneven, and challenges remain. While tourism demand has proven resilient, businesses struggle to attract and retain workers and although inflation is abating, price pressures continue to impact transport, accommodation, and hospitality costs. Geopolitical tensions remain high, and the increasing frequency of wildfires, floods, heatwaves, and other extreme weather events is impacting the sector. Looking ahead to the longer term, tourism is expected to continue to grow. This creates significant opportunities but also brings renewed challenges, reinforcing the importance of policies to support a resilient, sustainable, and inclusive future.*

**Keywords:** *Sustainable Tourism, Tourism Planning and Management, Tourist destinations, Over-tourism, Carrying Capacity, Partnership approach.*

## Introduction

The Covid pandemic was a sobriety moment for our society in general and the tourism sector in particular. The COVID-19 pandemic has produced by far the most

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serious crisis experienced by the sector overall. The level of the disruption caused by the COVID-19 pandemic has been far more severe than previous crises (e.g., SARS or the 2008-09 financial crisis) and has brought fundamental changes to the travel industry worldwide. The global health crisis has left governments across Europe facing a public health emergency, struggling to support their economies, and has taken a severe toll on the tourism sector. Global international travel is expected to decline by over 50% in 2020, with 2019 levels not being achieved until 2023 according to Tourism Economics' latest forecasts. The fundamental nature of tourism has changed, and the recovery of the sector is expected to be as gradual as the re-opening of different economies (ETC, 2020).

In addition there are new challenges for sustainable tourism, which relate not only to post-COVID, but the current political and security issues, energy crisis, the cost of living crisis driven by inflation as well as problems with lack of resources in many tourism destinations (e.g. financial, managerial, labour and structural). Tourism planning and management should therefore provide a strategy for sustainable development of tourism destinations. It is critical that conflicting interests are examined and resolved with mutually acceptable & participative planning solutions ensuring the compatibility of different strategies and the long-term satisfaction of all stakeholders in the tourism destination. Local people at tourism destinations are the most important stakeholders, as they provide local resources to visitors in exchange for economic benefits and an improved quality of life. Adequate returns on the resources utilized by tourists must be achieved. Measures should be taken to rationalize, regulate and legislate on the use of economic, socio-cultural and environmental impacts. Appropriate types and levels of tourism activity should therefore be determined according to the goals and objectives established through a coherent and well-orchestrated planning process that examines all vulnerabilities and involves all stakeholders (Buhalis, 2000).

The expectation that pre-crisis levels of tourism demand will not bounce back before 2023 were right for some tourism destinations and also provides them with an opportunity to reshape the industry towards one that is more sustainable, more innovative and that equally benefits travellers, local communities, the environment and local economies. The COVID-19 crisis emerged as a universal challenge like no other and thus global support, collaboration and understanding are required to mitigate the social and economic impact of the pandemic (ETC, 2020).

The events in the aftermath of the pandemic were harrowing for the tourism sector; unfortunately, predicted trends show that more events that are negative will continue crippling the industry in future. On the other hand, tourist destinations, which provided individual safety and distance, quality natural environment, and remoteness from the masses, were more successful survivors of the global health crisis. The latter brings us to the point of thoroughly rethinking the concept of sustainability. Pre-pandemic keywords bestowing the concept were, for example, responsible management, seeking added value for local products and services, safety and social responsibility, accessibility for all, assessment of the carrying capacity of the environment, excessive tourism or "overtourism", participatory planning, and partnership approach (Koščak & O'Rourke, 2020).

All these remain highly important for the future development of sustainable tourism. However, the post-pandemic discourse of sustainability has shifted towards

bringing understanding of how experiential approach in product design, security, general and personal hygiene, social distance, “green” - away from the mass visit and towards the preserved environment, conditions for the well-being of guests, and addressing nearby markets should be considered for sustaining tourism on the long run. Of course, this also entails the transformation of the development strategies and the search for new development paradigms, which can no longer bypass the principles of sustainable and responsible tourism or be allowed to move away from them. Hence, in the chapter, we will also provide a few good practices from tourism destinations that we believe could help us to illustrate how a rethinking of the sustainability paradigm could be applied to tourism destinations worldwide.

### **New horizons – towards a sustainable future**

Beyond the immediate steps to bring relief, we should look ahead to the future of tourism in the EU and look at how to make it more resilient and sustainable, learning from the crisis and anticipating new trends and consumer patterns related to it. Our shared ambition should be to maintain Europe as the world's leading tourist destination in terms of value, quality, sustainability and innovation. This vision should guide the use of financial resources and investment at European, national, regional and local levels.

At the core of this new ambition is sustainability and responsibility. A joint aim should be to (Koščak & O'Rourke, 2023):

- enable affordable and more sustainable transport and improved connectivity,
- boost smart management of tourism flows based on sound measurement and tools,
- diversify the tourism offer and extend off-season opportunities,
- develop sustainability skills for tourism professionals, and
- valorise the variety of landscapes and the cultural diversity across Europe – while protecting and restoring Europe's land and marine natural capital, in line with the strategic approach for a sustainable blue and green economy.

This should include the promotion of sustainable tourism accommodations and other innovative schemes such as EU Ecolabel and the Eco-Management and Audit Scheme (EMAS). This ambition towards sustainable tourism should guide investment decisions at EU level, but it can only work in combination with a strong commitment at regional and local level (ETC, 2022).

Equally, tourism can gain from the digital transition, providing new ways of managing travel and tourists flows, opportunities, and more choice, as well as more efficient use of scarce resources. The use of big data analysis can create and share accurate tourist profile segments and help understand traveller trends and needs. It can enable tourism to respond immediately to the changing customer demand and provide predictive modelling analysis.

Digital tools can also be confidence-building measures to reassure people that travel and tourism can be safe. This means investment in digital skills, including cybersecurity and fostering digital innovation, and connecting tourism businesses and actors with existing data spaces at local and regional level (for instance through the ongoing work on the European data space on mobility). This is particularly impor-



tant in rural, remote areas and outermost regions where tourism is fragmented and highly dependent on information, transport, and travel accessibility.

Within this digital transition, micro and small enterprises (MSEs) will need particular attention in supporting such tourism MSEs become more resilient and competitive. This requires building cross-sectoral linkages, interdisciplinary knowledge flow, stronger connections and capacity to ensure accelerated uptake of sustainable digitalised products, services and process innovations. Such networks should connect tourism with other industries to accelerate uptake of new solutions whilst fostering cross-sectoral investments in the tourism ecosystem with ICT, renewable energies, health and life sciences, agri-food, marine, the media, cultural and creative sectors.

## **Conclusion**

The experience of the Covid-19 pandemic in 2020 shows that the crisis has been successfully survived by those destinations that provide individual safety and distance, quality natural environment, remoteness from the masses, etc. Before 2020, the key words for the development of sustainable tourism (Koščak & O'Rourke, 2023) could be seen as related to:

- Responsible management
- Seeking added value for local products and services
- Safety and social responsibility
- Accessibility for all
- Assessment of the carrying capacity of the environment
- Managing excessive tourism
- Participatory planning and partnership approach

Certainly, this remains important for the future development of sustainable tourism. However, especially in view of the events in 2020 – 2024 that have not yet seen their end, the following new trends and implementation of measures that will ensure the following in tourist destinations should also be viewed as important in our new reality (Koščak & O'Rourke, 2023):

- Experiential approach in product design and new experiences to travellers
- Security & safety
- General and personal hygiene
- Social distancing
- The environmentally sustainable approach towards a preserved environment
- Conditions for the well-being of guests
- Addressing nearer markets
- Political stability

We believe that many local destinations will be able to provide all the above elements of the new reality. Without doubt, those who are successful in that process will have to face the task of transforming their development strategies and searching for new development paradigms that intensively incorporate the principles of sustainable and responsible tourism. Diluting of those principles will result in sliding back towards the complacency, which marked the tourism sector prior to 2020. For lo-

cal tourism to enter a fully sustainable and responsible environment and to develop and flourish within such an environment, requires a fundamental commitment to enduring change over the medium to longer term.

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# Promising Areas of Cooperation Between Russia and New BRICS Members Egypt and Ethiopia

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**Abstract:** *Following the results of the XV BRICS summit, it was decided to invite six new countries to join, including two African countries - Egypt and Ethiopia. Both of these countries can be called vulnerable due to technological dependence, which poses a threat to their sovereignty. It seems important to understand which technological areas of cooperation with Russia may be especially promising in order to ensure the technological sustainability of Egypt and Ethiopia. Egypt is one of the dynamically developing countries in Africa. Russia has a long history of cooperation with Egypt. Egypt's own technologies are still poorly developed, but the country can become a promising market for Russia in the field of space technologies, as well as medicine and pharmaceuticals. Russia could offer Egypt favorable and competitive conditions for cooperation in the space industry, for the creation and launch of satellites on stable launch vehicles. For Egypt, this could have not only an economic, but also a political effect associated with strengthening its "space leadership" in Africa. Russia and Ethiopia interacted in the scientific and technological sphere even before the collapse of the USSR. The priority areas of scientific and technological cooperation may include industry, agriculture, energy, geology, water management, healthcare and training of national personnel. Currently, both countries are also interested in developing biological research. Ethiopia considers Russia as one of the priority partners in the space industry. Russia can participate in projects to train national personnel, conduct scientific expertise, and develop Ethiopia's technological capabilities in the field of space. Taking into account the country's modest resources, equity financing from the Russian side could contribute to the development of bilateral projects in this industry.*

**Keywords:** *BRICS, Russia, Egypt, Ethiopia, technological sustainability, scientific and technological cooperation*

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## **Introduction**

One of the key trends in the transformation of the modern world order is multipolarity. In this regard, the BRICS interstate association can play a decisive role in promoting a more balanced international order. BRICS seeks to strengthen the multipolarity of the world through the development of strategic cooperation in various areas. With the expansion of BRICS, issues such as technological sustainability are on the agenda, that is, the ability of national systems and groups of countries to maintain their operability in the face of external shocks and repeated impacts of climatic, epidemiological and man-made nature. Joint activities of the BRICS countries to ensure technological sustainability can be seen as a way to realize the economic and technological ambitions of individual countries and their alliances. The BRICS platform provides greater opportunities for multilateral and bilateral cooperation between countries to increase technological resilience to external shocks and unwanted institutional influence from outside, especially for newly joining countries.

For Russia, cooperation with the BRICS countries expands opportunities to enter new technology markets. In this regard, it seems promising to search for points of interaction to promote Russian and jointly created technology products to the markets of these countries. Such a strategy should be economically attractive and correspond to the ideas about the technological sovereignty of the governments of the BRICS countries.

Following the XV BRICS summit in 2023, it was decided to invite six new countries to participate, including two African countries - Egypt and Ethiopia. Both of these countries have significant and as yet untapped potential for growth in technology markets.

## **Prerequisites for Russian-Egyptian cooperation**

Egypt is one of the fastest growing countries in Africa. Egypt's potential is enormous: a favorable geographical location at the crossroads of shipping routes, unique architectural monuments that attract tourists, and large unsaturated markets. The population of Egypt, according to some estimates, has now reached 108 million people, and by 2030 it is expected to reach 120 million people. The main industries are textile, food, manufacturing, tourism, chemical, pharmaceutical, construction, light, and metallurgy.

However, inflation reached over 37% in August 2023, and unemployment in the country is 7%. A major problem for Egypt is its overpopulation in a country with very limited fertile land and water resources. The overpopulation factor threatens Egypt's economic progress and social development. The health and education systems are also suffering. To address all these problems and thereby stabilize the economy, Egypt has approved a structural reform program as part of the broader Egypt Vision 2030 program.

Russia has a long history of cooperation with Egypt. The heyday of Soviet-Egyptian economic relations came in the 1950s and 1960s. In 1958 and 1960, the USSR and Egypt signed an agreement to provide Egypt with economic and technical assistance in the construction of the Aswan Dam. In 1963, an antibiotics and pharmaceuticals plant was built in the Abu Zaabal region and an oil refinery in Suez, in 1964 - an aluminum plant in Nag Hammadi, in 1974 - the Helwan Metallurgical Plant. In

total, by the early 1970s, 33 large industrial enterprises and 32 training centers built with the participation of the USSR were put into operation in Egypt. All of them still play an important role in the country's economy (Volkov, 2021, p. 12).

In April 2001, Russia and Egypt signed a new long-term program for the development of trade, economic, industrial, scientific and technical cooperation, designed for 10 years. In November 2006, a decision was made to create a Russian industrial zone in Egypt for the production of components for the automobile and aircraft industries, electric power engineering, and power engineering. In March 2008, an intergovernmental agreement on cooperation in the peaceful use of nuclear energy was signed. Bilateral relations are also developing in the space sector.

In 2014, an agreement was reached to create a Russian industrial zone in Egypt to implement the new Suez Canal project and to introduce a simplified regime for Egyptian goods to enter the Russian market. In February 2015, an agreement was signed to develop a project to build a nuclear power plant in Egypt. The project envisages the construction of a nuclear power plant with four units using Russian technology (Volkov, 2020, p. 48).

On May 25-26, 2015, the largest event in the history of bilateral relations took place in Cairo - the forum "Trade and Industrial Dialogue: Russia - Egypt". More than 200 businessmen took part in it from the Russian side, and representatives of about 300 organizations and companies from the Egyptian side. One of its main results was an agreement to create a joint investment platform.

### **Promising areas of Russian-Egyptian cooperation in the BRICS format**

Egypt's own technologies are still underdeveloped, but the country could become a promising market for Russia in the field of space technologies. Russia could offer Egypt favorable and competitive conditions for cooperation in the space industry, for the creation and launch of satellites on stable launch vehicles. For Egypt, this could have not only an economic but also a political effect associated with strengthening its "space leadership" in Africa.

Since the early 1990s, the National Authority for Remote Sensing and Space Sciences (NARSS) has been the main institution for the development of the Egyptian space industry. In 1999, NARSS was given the mandate to create Egypt's space program. To expand the scope of the tasks to be solved, the Egyptian Space Agency (EGSA) was established in 2018. Its tasks are to develop space science and technology in Egypt in order to build satellites and launch them from Egyptian territory. The Egyptian Space Agency also states its desire to localize the development of necessary space technologies in Egypt in line with the national goals of sustainable development.

Russia and Egypt already have a history of relations in the space sector, the peak of which was in 2015-2016. Russian companies designed and launched Egyptian satellites, and transferred control of them to the Egyptians. However, today Russia has many competitors in the Egyptian space sector. The Egyptians are certainly familiar with all the problems of the Russian space industry. Promoting cooperation requires new unique proposals and products from the Russian side that could compete with the products of Chinese and Western companies. Egypt already launches its rockets with the help of China and even SpaceX, and the unique Chinese offer to Egypt to participate in the International Lunar Research Station only adds interest to the de-



velopment of cooperation thanks to successful satellite launches. Russia can develop a scheme for creating satellites and allow Egypt to launch them at other sites, as well as offer favorable and competitive conditions for the creation and launch of satellites on stable launch vehicles (possibly with the involvement of other African countries for the purpose of political effect for Egypt, which seeks to be conditionally "the first for Africa"). In general, Egypt is ready to consider expanding ties with Russia, since it is interested in diversifying its contacts - this is evidenced by the logic of its actions in the space sector over the past decades (Sekacheva, 2024, p.13).

Egypt, as a country located in the tropical zone with a hot climate, has a high prevalence of infectious diseases, as well as various chronic diseases. In general, the Egyptian government plans to become a regional pharmaceutical hub in the coming years and increase its presence in foreign markets. The state also allocates funding for the gradual localization of drug production and the expansion of the presence of pharmaceutical companies in remote areas of the country. A significant part of the country's domestic market is provided by local production. Egyptian manufacturers are mainly small and medium-sized private companies. They mainly produce cheap generics.

The Egyptian government is trying to provide the country's large population with essential medicines and fight some common diseases (for example, hepatitis C). Most of the market is provided by local manufacturers, but the products of Egyptian companies mainly consist of generics, as companies have little interest in R&D and innovation. In addition, modern solutions are provided by imports, which are several times greater than exports. Interest in the Egyptian market is shown by Chinese pharmaceutical companies, which are starting to implement large projects in the country. The country's trade balance is positive only in the segment of special medical products that do not require complex technologies and high qualifications for production. The large and growing Egyptian market may be of interest to Russian pharmaceutical companies. As trade statistics show, Egypt needs antibiotics, vaccines and various dosed drugs (Ikaeva, Ardasenov, 2024, p. 41).

Another promising sector for bilateral cooperation between Russia and Egypt is microelectronics. The development of this industry in Egypt is facilitated by the growing domestic consumer market and developing solar energy, which are considered national priorities. However, Egypt remains a major importer of microelectronics and is dependent on foreign technology. Renewable energy and information and communication technologies, which are priorities for the country, are major consumers of microelectronic products. As of 2021, the volume of electronics imports exceeded more than \$ 7.7 billion, and the volume of microelectronics imports alone amounted to about \$ 470 million (Sidorova, 2024, p. 76). Thus, Egypt is a fairly large market for the electronics industry. The government has taken a number of steps to develop this industry. The first is attracting foreign investment. Investors are offered tax breaks and duty exemptions in free economic zones and technology parks. A number of technology parks have also been created in Egypt. Scientific research in the field of electronics and microelectronics is conducted at universities, as well as at the largest specialized scientific institute in Egypt - the Electronics Research Institute, which employs about 300 researchers. A business incubator is located on the territory of the institute. The most significant Egyptian companies in the field of microelectronics work in the segments of semiconductors (chips, integrated cir-

cuits), sensors and detectors, resistors, radio electronics and telecommunications equipment (including microwave devices), as well as light-emitting diodes (LED).

### **Prerequisites for Russian-Ethiopian cooperation**

Ethiopia has one of the fastest growing economies on the African continent, with a population of approximately 102 million. Ethiopia is located close to markets in the Middle East, Sudan, South Sudan, Kenya, and Somalia. However, being land-locked, it is forced to use the Djibouti seaport for its trading activities. Ethiopia's major industries include agriculture, construction, manufacturing, resources and energy, tourism, and food processing.

The agricultural sector in Ethiopia accounts for over 50% of the country's GDP. Favorable weather conditions contribute to successful farming in the country's various ecological zones. Ethiopia's agricultural sector includes processed agro-products, beverages, livestock products, leather, and textile industries. The commercial farming sector employs over 60% of Ethiopia's working population. The main crops grown are spices, coffee, tea, cut flowers, honey, cotton, wheat, oilseeds, beeswax, vegetables, fruits, and legumes. Ethiopian farmers also grow coffee, which is one of the world's most traded products. Over 15 million workers are involved in various stages of its production, and the annual export revenue from the product is approximately \$881 million. Subsistence livestock farming is also an important part of Ethiopia's agricultural sector. Agriculture acts as a support for other segments of the Ethiopian economy such as machinery and equipment manufacturing and wholesale and retail businesses.

The manufacturing industry in Ethiopia plays an important role in the country's economy. Companies are involved in the production of processed food, textiles, beverages, tobacco, chemicals, footwear, soap and other products. Ethiopia has the most famous industrial park in Africa, the Hawassa Industrial Park, which boasts many related industries. It is also the only park in Africa that exclusively produces textiles and clothing. The park employs over 60,000 people, mostly women (Konokhova, 2022, p.42).

Mineral resources mined in Ethiopia, such as tantalum and gold, account for about 10% of the country's GDP. The country also produces niobium, gemstones, soda ash, and rock salt. Ethiopia's hydroelectric power comes from dams on the Blue Nile River and its tributaries. The government plans to build more hydroelectric power plants in other parts of the country, which will help improve rural electrification.

Russian-Ethiopian economic cooperation intensified in 1977 with the coming to power of Mengistu Haile Mariam, who proclaimed the construction of socialism as his goal. With the assistance of the USSR, more than 20 major projects were implemented in Ethiopia: dozens of industrial enterprises and large energy facilities, a polytechnic institute were built. Soviet geologists discovered deposits of various minerals. Assistance was provided in growing tea and oil crops, and creating livestock farms. Military-technical cooperation also actively developed. More than 20 thousand Ethiopian citizens received an education in the USSR, and five thousand specialists underwent professional training (Nardos, 2022, p. 29).

Russia's exports to Ethiopia consist of food products and agricultural raw materials, machinery, equipment and vehicles. Russia's imports from Ethiopia consist of food products and agricultural raw materials, as well as textiles and footwear.

In 2001 and 2005, most of Ethiopia's debt to Russia, totaling \$6 billion, was written off, with the remainder to be repaid under the "debt-for-development" scheme.

### **Promising areas of cooperation between Russia and Ethiopia within the BRICS framework**

The main areas and projects of cooperation between Russia and Ethiopia are recorded in the "Medium-Term Program for the Development of Trade, Economic, Scientific and Technical Cooperation". It includes such economic sectors as the oil and gas industry, electric power, geology and natural resources, industry, water management and irrigation, land development, agriculture, health care, and training of national personnel.

Russian companies are working in Ethiopia to explore hydrocarbon deposits. In 2023, it became known that AvtoVAZ was actively negotiating the organization of Lada exports and assembly with Ethiopia. A joint Russian-Ethiopian biological expedition is underway. Russian experts are taking part in research on the use of innovative methods to increase agricultural productivity in Ethiopia. The issue of creating a joint Russian-Ethiopian Biological Center on its basis has been practically resolved. A number of agreements were signed between scientific institutions of the two countries. Cooperation in the field of fisheries is developing.

Cooperation in the field of nuclear energy is developing. In 2017, the Rosatom State Corporation and the Ethiopian Ministry of Science and Technology signed a memorandum of understanding on cooperation in various areas of peaceful use of nuclear energy. In April 2019, Russia and Ethiopia signed a three-year "roadmap" for cooperation in the nuclear field, including a possible NPP project and the construction of a Nuclear Science and Technology Center in Ethiopia.

The pharmaceutical industry is one of the promising areas of economic cooperation between Russia and Ethiopia. Ethiopia is located in the subequatorial and tropical zones of the African continent, so the country's population is susceptible to fairly severe infectious and parasitic diseases, some of which are endemic. In addition to them, chronic and oncological diseases are also common. The high incidence of diseases is due to the low standard of living in the country, poor sanitary and hygienic conditions, especially in rural areas, where about 80% of the population lives, and a weak health care system. However, the gradual growth of urbanization, standard of living and literacy of the population lead to an increase in demand for modern medical services and medicines (Marew, Richmond, Belete, Tsige-Gebre, 2022, p. 1051)

The National Policy on Science, Technology and Innovation, adopted in 2010, identified pharmaceuticals as a priority sector. In 2015, together with WHO, the government developed the National Strategy and Plan for the Development of Pharmaceutical Manufacturing (2015-2025), which contains the following strategic objectives: increasing access to medicines through the creation of high-quality local production; optimizing the national regulatory system for medicines; creating incentives for companies to move up the value chain: developing human resources through appropriate education, stimulating the development of active pharmaceu-

tical ingredients production; creating a research and development platform; attracting foreign direct investment in the pharmaceutical sector. In 2019, the government established the Kilinto Pharmaceutical Industrial Park, located near Addis Ababa (Selam, Abera, Geremew, Ali, 2022).

It seems that the Ethiopian market with a relatively low level of competition could be of interest to Russian companies. In general, Ethiopia has a favorable policy for investors, relatively cheap labor and specialized turnkey industrial parks for investment in the pharmaceutical industry. Over the past two years, the Ethiopian Ministry of Industry and Trade has already signed a number of memorandums of understanding with six Russian companies that are interested in investing in the pharmaceutical sector. In December 2023, a Russian-Ethiopian business forum was held in Addis Ababa, one of the topics of which was cooperation in the field of healthcare and pharmaceuticals. Theoretically, a promising area of cooperation in this area is not only the supply of Russian products to the Ethiopian market, but also the creation of capacities by Russian companies in the country for the development of auxiliary production facilities that should be integrated into the pharmaceutical industry. First of all, we are talking about the production of modern medical packaging, labels, foil, special medical tubes and bottles, measuring caps and similar products. The production of pharmaceutical sugar, starch and other components is also in demand.

The space industry is one of the promising areas of economic cooperation between Russia and Ethiopia. Ethiopia is one of the countries on the continent that has relatively recently launched its own space program. Thus, Ethiopia seeks to accelerate the overall economic growth of the country through the development of advanced space technologies. The Ethiopian space program began with the founding of the Ethiopian Space Science Society in 2004. At the first stage, the Society united 47 scientists, engineers and entrepreneurs. Soon they were joined by a consortium of 32 Ethiopian public and one private university. In 2013, the Entoto Observatory and Research Center was opened, which was equipped with a modern optical telescope. The observatory is located on the top of the highest point in the capital, Addis Ababa. In 2016, the Ethiopian Institute of Space Science and Technology was established.

Currently, the Ethiopian space research program has passed the stage of theoretical justification, development of a regulatory framework and has entered the stage of practical implementation. Today, the plans include the development of ground infrastructure, the creation and launch of artificial satellites. In the near future, it is also planned to create a new training center for training specialists for the space industry, and in the more distant future, the creation of its own industrial capacities for the production of satellites. Full localization of the production of satellites and control systems in Ethiopia is the long-term and most important goal of the space program. It is assumed that the implementation of all these measures will soon provide Ethiopia with the ability to monitor the environment, manage resources and respond to natural disasters. In addition, the country's leadership sets the task of expanding communication and navigation capabilities through the use of satellite systems. The country's proximity to the equator, a vast highland plateau rising more than 4,500 m above sea level, and consistently dry weather in most regions make Ethiopia one of the few places in the world that can provide favorable conditions for both launch facilities and space observation (Dinaol, 2023, p. 249).

Ethiopia faces a number of challenges in building and maintaining its space and satellite industry capabilities. The main ones remain limited financial and human resources and insufficient international cooperation. Another challenge for Ethiopia's space program is the lack of a domestic industrial base, which will hinder the country's satellite production, subsequent launches, and research and testing. In 2023, the space industry announced its intention to build its own satellite communications system using national scientific and technical capabilities.

Cooperation with Russia is developing with the Keldysh Institute of Applied Mathematics of the Russian Academy of Sciences and the Lomonosov Moscow State University. Currently, the Federal State Unitary Enterprise "Space Communications" has announced plans to participate in the distribution of five Ethiopian cable TV channels. In general, the space direction of Ethiopian-Russian cooperation seems to be one of the most in-demand at present. It includes both opportunities for participation in projects for training national personnel and providing scientific expertise on technology development.

Microelectronics is another promising area for cooperation between Russia and Ethiopia. Electronics production in Ethiopia is at an early stage of development. However, key sectors for the government, such as ICT and renewable energy, as well as the country's large market with high growth potential, can contribute to the development of microelectronics. The electronics market will grow if the population's income increases, the economy and social sphere are digitalized. The Ethiopian electronics market could become a promising direction for Russian exports. This is especially true for electronics and electrical equipment intended for information and communication technologies and energy - industries that are a priority for the country and are large consumers of electronic products.

## **Conclusion**

Thus, Egypt and Ethiopia can be considered as promising partners for cooperation with Russia within the BRICS framework. Given the current tensions between Egypt and Ethiopia over the Ethiopian Renaissance Dam, cooperation between the two countries in BRICS could help bring about a political settlement. There are areas in which bilateral collaborations are already developing. Russia cooperates with Egypt in the space sector and in the creation of industrial infrastructure. Egypt's own technologies are still poorly developed, so the country can become a promising market for Russia for space technologies, as well as medicine and pharmaceuticals. In cooperation between Russia and Ethiopia at the interstate level, priority areas have been identified, which include industry, agriculture, energy, geology, water management, healthcare and training of national personnel. There are promising industries where cooperation with Russia can be most mutually beneficial.

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# Africa's Role in Navigating Global Contradictions: Harnessing Science, Knowledge, and Aspirations for Sustainable Socio-Economic Development

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**Abstract:** *In an increasingly complex global landscape characterized by economic disparities, rapid technological advancements, and pressing environmental challenges, Africa stands at a critical juncture in shaping its socio-economic trajectory. This study delves into Africa's pivotal role in addressing these global contradictions by leveraging science, knowledge, and aspirations to foster sustainable development. Through a comprehensive approach that includes stakeholder interviews with policymakers, researchers, and community leaders across the continent, the research uncovers diverse perspectives on navigating these challenges. By conducting comparative analyses and examining successful case studies of innovative initiatives, the study assesses Africa's capacity to utilize science, technology, and innovation as catalysts for local development and contributions to global solutions. The research highlights the importance of effective policy frameworks, community engagement, and strategic partnerships in promoting inclusive socio-economic growth. The findings underscore Africa's potential to drive transformative change on the global stage, emphasizing the critical role of collaboration and resilience in ensuring long-term sustainability. This study provides actionable insights and recommendations to enhance Africa's strategic response to global complexities, reinforcing its position as a key player in the global pursuit of sustainable development.*

**Keywords:** Sustainable development; global contradictions; socio-economic development; technological innovation; strategic partnerships

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## **Introduction and Background**

The 21<sup>st</sup> century presents a multifaceted environment for Africa, where economic inequalities widen, technological advancements accelerate, and environmental challenges intensify (Yu, and Huang, 2021; Ezeigweneme et al., 2024). According to Cilliers (2021) the global economic landscape remains uneven, with many African nations grappling with poverty and limited access to essential resources. The World Bank reports that the richest 10% of the global population controls 76% of the world's wealth, while the bottom half owns less than 1% (World Bank, 2020b). For Fakunle et al., (2023), technological progress, though promising, threatens to disrupt traditional economies and exacerbate existing inequalities. Environmental challenges, such as climate change, present another layer of complexity, with the Continent experiencing significant impacts, including extreme weather events and biodiversity loss (Ogwu et al., 2023; Ezeigweneme et al., 2024).

Despite these challenges however, Nhamo (2017) re-asserts that the African possesses a wealth of assets that can fuel its sustainable development journey. The continent boasts a rich and healthy variety of cultures, traditions, and indigenous knowledge systems, which can foster innovation and provide unique solutions to development challenges (Bojuwoye and Moletsane-Kekae, 2018). Abundant natural resources, including minerals, fertile land, and diverse ecosystems, offer potential for economic growth and poverty reduction through sustainable management (Khan and Sultana, 2020). Africa is also witnessing a surge in technological innovation, with young entrepreneurs developing solutions for local and global problems, offering immense potential for the future (Odeyemi et al., 2024).

This article examines Africa's crucial role in addressing global contradictions and promoting sustainable development. It investigates how the continent leverages its resources, technological advancements, and aspirations to foster prosperity. The research focuses on Africa's use of cultural, natural, and technological assets to tackle economic, technological, and environmental challenges. It emphasizes Africa's evolving global role, assessing the impact of science, technology, and innovation (STI) on local development, and analysing policy frameworks and community engagement strategies. The study includes a review of successful initiatives, comparative analyses of African countries' strategies, and stakeholder perspectives on policy and community projects. The findings highlight the importance of strategic partnerships, inclusive policies, and community engagement for global sustainable development.

## **Research Methodology**

This article employs a comparative case study approach, utilizing mixed methods to gather and analyse data. This includes both qualitative and quantitative data to provide a comprehensive understanding of the issues at hand (Yin, 2018). The comparative nature of the study allows for the examination of different strategies and their outcomes across various contexts (Creswell and Plano Clark, 2017). The data collection involves stakeholder interviews and the review of successful case studies and innovative initiatives. In-depth interviews with policy advisors, researchers, and community leaders provide diverse perspectives on development challenges and strategies (Kvale and Brinkmann, 2015; Bryman, 2016). Additionally, the examina-

tion of case studies from different African countries offers insights into best practices and lessons learned (Flyvbjerg, 2006; Thomas, 2011). Data analysis involves thematic analysis of interview data and policy analysis of existing development frameworks (Braun and Clarke, 2006). Thematic analysis helps identify key themes and insights from the interviews, while policy analysis evaluates the effectiveness of current policies and identifies gaps. This comprehensive approach ensures a thorough understanding of the issues and the identification of effective strategies (Bardach, 2012).

## **Literature Review**

### ***Global disparities and technological advancements***

Economic inequalities and rapid technological changes are major themes in global development discourse (Horner and Hulme, 2019). According to Tica et al. (2021) these disparities lead to unequal access to opportunities, perpetuating cycles of poverty and inequality. While offering significant potential for growth and development, technological advancements can also exacerbate these inequalities if access to new technologies is not equitable (UNDP, 2020b). This digital divide can limit the ability of certain populations to participate fully in economic and social activities, thus widening the gap between different socio-economic groups (Kalu and Falola, 2019). The digital divide is particularly pronounced on the African continent, as according to the International Telecommunication Union (ITU), only about 28% of the African population had access to the internet in 2020, compared to the global average of 63% (ITU, 2020). This gap according to Pick and Sarkar (2015) hampers the continent's ability to capitalize on digital advancements and integrate into the global digital economy. Furthermore, rural areas are often left behind, exacerbating regional inequalities within countries. For example, in Nigeria, while urban internet penetration stands at around 55%, rural penetration lags significantly at approximately 25% (World Bank, 2019).

### ***Africa's position in the global context***

Historically, Africa has faced numerous challenges, including colonial exploitation, political instability, and socio-economic struggles (Mlambo et al., 2024). However, according to Tambo et al. (2016) recent decades have seen substantial progress in various sectors, driven by innovative development strategies and increased international collaboration. Previous research highlights the importance of leveraging local resources and knowledge and the need for policies that address both immediate and long-term developmental needs (World Bank, 2020). Africa's current socio-economic status, characterized by both opportunities and challenges, underscores the continent's potential to contribute to global solutions (Grinin and Korotayev, 2024). Despite this progress however Mlambo (2023), postulates that many African countries continue to struggle with issues of governance, corruption, and political instability, which impede development efforts. According to Transparency International's Corruption Perceptions Index 2020, Africa remains one of the most corrupt regions in the world, with an average score of 32 out of 100 (Transparency International, 2020). Countries like South Sudan, Somalia, and Libya are among

the lowest-ranked globally, reflecting severe governance challenges that undermine socio-economic development.

### ***Environmental challenges and sustainable development***

Climate change poses significant risks to sustainable development. Issues such as rising temperatures, changing precipitation patterns, and increasing frequency of extreme weather events threaten food security, water availability, and overall human well-being (Ogwu et al., 2023). Environmental degradation and resource depletion further complicate these challenges, necessitating urgent action to ensure long-term sustainability (IPCC, 2018). Africa's environmental challenges are compounded by insufficient infrastructure and limited financial resources to implement sustainable practices (Ezeigweneme et al., 2024). For example, deforestation rates in Africa are among the highest in the world, with the continent losing 3.9 million hectares of forest annually between 2010 and 2020 (FAO, 2020). Additionally, the lack of robust climate adaptation strategies has left many African countries vulnerable to climate-related disasters, such as the devastating droughts in East Africa that have led to severe food shortages and humanitarian crises (UN-OCHA, 2020).

### ***Leveraging science, technology, and innovation for local development***

According to Kahn (2022), science and technology play a crucial role in Africa's socio-economic development. This is because technological advancements, such as the proliferation of mobile phones, have enabled access to information, financial services, and healthcare. Africa is the world's second-largest mobile phone market, with 495 million subscribers in 2020, projected to reach 623 million by 2025 (World Bank, 2019a). Renewable energy projects, like the Noor Solar Complex in Morocco, are addressing energy shortages and promoting sustainable development (Khan and Sultana, 2020). The International Renewable Energy Agency (IRENA) estimates that renewable energy could meet nearly a quarter of Africa's energy needs by 2030. However, the potential of STI to drive development in Africa has often been hampered by significant challenges (van Heerden and Mulumba, 2023). For instance, the region faces a substantial skills gap, with a shortage of qualified professionals in critical fields such as engineering, information technology, and healthcare (Habiyaemye et al., 2022). According to the World Bank, only 43% of Sub-Saharan Africa's population had access to electricity in 2018, highlighting the need for improved infrastructure (World Bank, 2018). Additionally, funding constraints limit the capacity for research and innovation, with Africa accounting for less than 1% of global research output (UNESCO, 2015).

### ***Sustainable Development Goals (SDGs)***

According to Mahlatsi (2021) the Sustainable Development Goals (SDGs) provide a comprehensive framework for addressing global challenges, including poverty, inequality, and environmental sustainability. Africa's development strategies align with the SDGs, aiming to eradicate poverty, promote inclusive growth, and ensure environmental sustainability (United Nations, 2015). The alignment of Africa's strategies with the SDGs underscores the continent's commitment to global development goals and provides a relevant context for the study (Haywood et al., 2018). Despite the alignment with SDGs however, Akanle et al. (2022), puts forth the idea that prog-

ress towards these goals has been slow in many African countries. The 2020 Africa SDG Index and Dashboards Report indicated that no African country is on track to achieve all the SDGs by 2030. The report highlighted significant gaps, particularly in areas such as poverty reduction, quality education, and infrastructure development (SDSN, 2020). For instance, over 50% of the population in Sub-Saharan Africa still lives in extreme poverty, and more than 100 million children are not enrolled in school (World Bank, 2020b).

## **Findings and Analysis**

### ***Policy frameworks and effective strategies***

According to Caiado (2017) effective policy frameworks are essential for promoting sustainable development, involving the analysis of existing policies, identification of gaps, and incorporation of stakeholder perspectives (Khan and Sultana, 2020). National development plans, regional agreements like the African Union's Agenda 2063, and international commitments such as the Sustainable Development Goals (SDGs) are key frameworks supporting sustainable development in Africa. These frameworks provide a roadmap for achieving socio-economic development and environmental sustainability (African Union, 2015). For Barua (2020) analysing policy effectiveness and gaps reveals areas for improvement. Stakeholder perspectives highlight the need for more inclusive policy implementation, greater investment in education and research, and stronger governance structures. The African Governance Report 2019 indicates that improved governance could increase Africa's GDP growth by 2-3 percentage points annually (African Union, 2019).

### ***Africa's strategic response to global complexities***

Africa's diverse cultural, natural, and technological resources provide a strong foundation for addressing global complexities (UNESCO, 2019). The continent's rich cultural heritage offers unique perspectives and solutions rooted in traditional knowledge, such as sustainable agricultural practices like intercropping and agroforestry (Bojuwoye and Moletsane-Kekae, 2018). Africa's natural resources, including vast mineral reserves and renewable energy potential, provide significant economic opportunities (World Bank, 2020). For Abate et al. (2023) technological advancements, particularly in mobile technology and digital innovation, are transforming African economies and societies. For instance, M-Pesa in Kenya revolutionized mobile banking, providing financial services to over 49 million users across Africa and beyond by 2021 (Safaricom, 2021). On the other hand, Rwanda's investment in information and communication technology has fostered a thriving tech ecosystem, contributing to a GDP growth rate of 10.9% in 2019, one of the highest in Africa (International Renewable Energy Agency, 2020). A comparative analysis reveals that success often hinges on the following key success factors:

- Effective leadership, which is crucial in driving development initiatives and ensuring their sustainability (Bryman, 2016).
- Partnerships or collaboration between governments, the private sector, and civil society to enhance resource mobilization and knowledge sharing (Haywood et al., 2018); and

- The efficient management of natural and technological resources to ensure vital for sustainable development (Khan and Sultana, 2020).

Practical examples of these include Ethiopia's investment in renewable energy, particularly in hydroelectric power, has made it a leader in sustainable energy initiatives (Tesfay et al., 2024), while South Africa focuses on renewable energy to combat environmental challenges and agricultural modernization to address food security and economic growth (Smarte et al., 2024).

### ***Harnessing science, technology, and innovation (STI): case studies in action***

Innovation strategies tailored to local needs are essential for harnessing technology effectively (van Heerden and Mulumba, 2023). Precision agriculture, for instance, utilizes technology to improve agricultural practices, significantly enhancing food security and empowering rural communities (John and Rose, 2024). Examples include leveraging data analytics to optimize crop yields and utilizing mobile applications to connect farmers with markets. Initiatives like the African Agricultural Technology Foundation's work on drought-resistant crops help mitigate the impacts of climate change on agriculture (Hussein and Toru, 2024). Mobile technology in agriculture, such as the iCow app in Kenya, helps farmers manage their livestock and improve productivity (Resti et al., 2024). However, according to Horvat et al., (2020) challenges such as limited infrastructure, funding constraints, and skills gaps must be addressed to fully leverage technology for development. The World Bank reports that only 43% of Sub-Saharan Africa's population had access to electricity in 2018, highlighting the need for improved infrastructure (World Bank, 2018). Additionally, there is a significant skills gap in the region, with a shortage of qualified professionals in fields such as engineering, information technology, and healthcare (UNESCO, 2019).

### ***Building resilience through collaboration***

Africa's journey toward sustainable development is not solitary. This because strategic partnerships and collaborations with international organizations, developed nations, and civil society groups are crucial for building resilience and ensuring long-term sustainability in an interconnected world (Khan and Sultana, 2020). According to Samuel and Clarke (2022) international partnerships provide access to critical resources, expertise, and funding, accelerating progress on key development goals. North-South partnerships have fostered knowledge transfer, technology sharing, and joint research initiatives (Vazquez-Brust et al., 2014). However, it is crucial to ensure these partnerships are equitable and respect African ownership of development strategies. South-South cooperation leverages collective strengths, fosters regional integration, and facilitates the exchange of best practices, promoting African leadership in shaping its development trajectory (Kvale and Brinkmann, 2015). Civil society organizations (CSOs) play a vital role in holding governments accountable, promoting transparency, and advocating for the needs of marginalized communities, strengthening the development process and ensuring its inclusivity (Haywood et al., 2018).

## **Policy Implications and Recommendations**

### ***Strategic partnerships and collaborations***

Strategic partnerships and collaborations are essential for fostering resilience and sustainability. Partnerships between governments, the private sector, international organizations, and civil society can leverage resources and expertise to address complex challenges. For example, the Alliance for a Green Revolution in Africa (AGRA) collaborates with various stakeholders to promote agricultural transformation across the continent (AGRA, 2020). Case studies of effective collaborations, such as public-private partnerships in renewable energy projects, highlight the benefits of strategic partnerships. For instance, Morocco's Noor Solar Project, one of the world's largest solar power complexes, was developed through a public-private partnership and has significantly increased the country's renewable energy capacity (IRENA, 2020). Strategies for building and maintaining strategic partnerships include establishing clear goals, ensuring mutual benefits, and fostering trust and communication. The impact of partnerships on local and global development is significant, as they enable the sharing of knowledge, resources, and technologies, and promote sustainable development practices (Haywood et al., 2018).

### ***Investing in STI education and infrastructure***

A skilled workforce is essential for utilizing STI effectively (Habiaremye et al., 2022). Increased investment in science, technology, engineering, and mathematics (STEM) education, coupled with the development of robust research infrastructure, is crucial (van Heerden and Mulumba, 2023). Strengthening research and development (R&D) capacity enhances Africa's ability to develop solutions that address local challenges and contexts (Munthali et al., 2019). This according to Twiringiyimana et al. (2021) requires funding dedicated research institutions, fostering collaboration between universities and the private sector, and encouraging innovation through incentive programs. For instance, Rwanda's Kigali Innovation City aims to create a hub for technology and innovation by bringing together universities, technology companies, and start-ups to collaborate and drive economic growth (World Bank, 2019c). Additionally, increased funding for R&D can lead to breakthroughs in sectors such as agriculture and healthcare, directly impacting local communities and improving quality of life.

### ***Promoting inclusive development***

STI-driven development must be inclusive, ensuring all segments of society benefit (van Heerden and Mulumba, 2023). Targeted initiatives to bridge the digital divide, empower women and girls in STEM fields, and support the development of rural communities are essential (UNDP, 2020b). Fostering innovation ecosystems that encourage entrepreneurship can be achieved through initiatives such as creating business incubators, facilitating access to venture capital, and promoting collaboration between start-ups, researchers, and established businesses. For example, programs like She Leads Africa support female entrepreneurs in Africa by providing access to training, mentorship, and funding opportunities, thereby promoting gender equality in the business sector (She Leads Africa, 2020). Similarly, initiatives like M-Pesa in Kenya have revolutionized financial inclusion by providing mobile

banking services to previously unbanked populations, promoting economic empowerment and development (World Bank, 2020a).

### ***Strengthening governance and transparency***

Effective governance and robust regulatory frameworks ensure responsible use of STI and attract foreign investment (van Heerden and Mulumba, 2023). Transparency and accountability are key to building trust with citizens and fostering sustainable development (Khan and Sultana, 2020). Strengthening governance structures and promoting transparent decision-making processes are essential for ensuring that development efforts are aligned with the needs and aspirations of local communities. For instance, the African Peer Review Mechanism (APRM) promotes good governance and socio-economic development through self-assessment and peer review, helping countries to improve their governance practices and achieve sustainable development (APRM, 2020). By ensuring that STI policies are transparent and inclusive, governments can build public trust and foster a more conducive environment for innovation and development (van Heerden and Mulumba, 2023).

### ***Future aspirations and planning***

Africa's vision for its future socio-economic trajectory involves addressing key challenges such as poverty, inequality, and environmental sustainability while capitalizing on opportunities for economic growth and technological advancement (World Bank, 2019b). Planning for long-term sustainability and resilience requires integrating scientific advancements and aspirational goals into development strategies. Potential for Africa to drive transformative change on the global stage includes leading in areas such as renewable energy, digital innovation, and sustainable agriculture. By harnessing its unique strengths and leveraging strategic partnerships, Africa can contribute significantly to global development and sustainability (Haywood et al., 2018). For example, Africa's vast renewable energy potential, particularly in solar and wind, can position the continent as a leader in the global transition to sustainable energy (IRENA, 2020). Similarly, digital innovations such as mobile banking and e-health can improve access to essential services and drive inclusive growth.

## **Conclusion**

### ***Summary of key findings***

Africa stands at a pivotal moment in its history. By harnessing its rich tapestry of resources, embracing technological advancements, and fostering strategic partnerships, the continent has the potential to become a global leader in sustainable development. This research highlights the significant strides made in leveraging science, technology, and innovation (STI) for local development, emphasizing the importance of inclusive policies, community engagement, and strategic collaborations (van Heerden and Mulumba, 2023).

Key findings include:

- **Strategic partnerships and collaborations:** Initiatives such as Morocco's Noor Solar Project exemplify how public-private partnerships can signifi-

cantly enhance renewable energy capacities and foster sustainable growth (Haywood et al., 2018).

- **Leveraging STI for development:** Investments in STEM education, research infrastructure, and innovation ecosystems are critical for addressing local challenges and fostering economic growth (van Heerden and Mulumba, 2023).
- **Promoting inclusive development:** Programs like M-Pesa in Kenya and She Leads Africa demonstrate the transformative impact of digital innovations and gender-inclusive policies on socio-economic development (World Bank, 2019a, She Leads Africa, 2020).
- **Strengthening governance and transparency:** Effective governance and robust regulatory frameworks are essential for responsible STI use and attracting foreign investment (van Heerden and Mulumba, 2023).

By committing to these strategies, Africa can secure a prosperous and sustainable future for its people and contribute meaningfully to tackling global challenges. This research is not merely an analysis; it is a call to action. By implementing the recommendations outlined here, Africa can embark on a transformative journey toward a brighter future, not just for itself, but for the entire world.

#### ***Future research directions***

Further research should focus on evaluating the long-term impacts of current development strategies and identifying emerging challenges and opportunities. Areas for further investigation include:

- **Digital technologies and governance:** Exploring how digital tools can enhance transparency, accountability, and citizen engagement in governance processes.
- **Climate change and socio-economic development:** Assessing the impacts of climate change on various sectors and developing adaptive strategies to mitigate these effects.
- **Innovative financing mechanisms:** Investigating new models of financing that support sustainable development initiatives, such as green bonds and impact investing (World Bank, 2019a).

These insights will contribute to the global development discourse and inform future policy-making processes.

#### ***Final Thoughts***

In summary, Africa's role in navigating global contradictions is crucial for its own development and for addressing global challenges. The continent's potential lies in its ability to harness science, knowledge, and aspirations for sustainable socio-economic development. Strategic partnerships and collaborations, community engagement, and effective policy frameworks are key to achieving this vision. Future research and policy development should focus on enhancing these strategies to ensure long-term sustainability and resilience. Africa's journey toward sustainable development is not only vital for the continent but also for the global community. By leading in areas such as renewable energy, digital innovation, and sustainable agri-



culture, Africa can set an example for the world and contribute to a more equitable and sustainable future for all.

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# Africa in the Theory of Regional Security Complexes and the Practice of Modern International Relations

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**Abstract:** *International relations are mainly relations between states, although states are not their only subject. This fact is especially relevant in the period after the Cold War, and especially after the beginning of the conflict between Russia and Ukraine in 2022. For the umpteenth time, historically, it has been shown that security is a prerequisite for the survival and development of man and his communities. The theory of regional security complexes has been developing since the last decade of the last century, i.e. after the Cold War. In that theory, a different number of regions were identified, which, from a security point of view, have similar characteristics, and were named as complexes and sub-complexes. In various approaches to regional security complexes, the geospaces of Europe and Asia or Eurasia occupy a central place. For centuries, Africa was a region dominated by the colonial powers of Europe. During the Cold War, significant anti-colonial processes began in Africa, resulting in the independence of a large number of countries, which primarily joined the Non-Aligned Movement. After the Cold War and the collapse of American unipolarism, and in the conditions of global international relations, Africa becomes the central scene of conflict between world powers in the process of the emergence of a multipolar world order. The aim of this work is twofold. First, to define Africa from the perspective of the theory of regional security complexes. Second, to determine the positioning of world powers in Africa as the scene of a new conflict in contemporary international relations.*

**Keywords:** *Africa, Theory of regional security complexes, Contemporary international relations.*

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## **Introduction**

The relationship between theory and practice is an irreplaceable approach to the study of international relations, especially in the field of security and geopolitics. Due to its centuries-old central role in international relations, the state is also in the focus of security analysis. However, since the eighties of the last century, more and more importance has been attached to regions and the theory of regional security has been developed (Thompson, 1973; Neuman, 1994; Lake and Morgan, 1997, etc.). Professor Barry Buzan of the Copenhagen Security School (Buzan, 1983) had a special influence on the stabilization of regional approaches to security, and later consolidated with Ole Waever in the Theory of Regional Security Complexes - TRSC (Buzan and Waever, 2003).

From a theoretical and practical point of view, Africa is a very interesting continent. Namely, before World War II, there were only four independent states in Africa: Liberia, Ethiopia, Egypt and the Union of South Africa (Forca, 2021), while the other parts were under the colonial rule of European hegemons. Today, Africa is a continent with about 1.3 billion inhabitants living in 55 independent countries. Freeing themselves from colonialism, most African countries joined the Non-Aligned Movement. After the Cold War, and especially in this century, Africa is becoming one of the key arenas for intra-state conflicts, but also for conflicts between great powers for dominance in the region. Therefore, the subject of this paper is Africa. By applying the comparative method and content analysis, the subject of the work is analyzed from two aspects: 1) Africa in the theory of regional security complexes and 2) The position of Africa in the global geopolitical conflict of the modern world.

### **Africa in the theory of regional security complexes**

The geopolitical picture of the world after the Cold War was presented by Professor Barry Buzan and colleagues from the Copenhagen School of Security with the formula 1+4+11 (Varga, 2020:50): **One** superpower - the USA, **four** regional powers - China, Japan, Russia and the European Union and **11 regions** (regional security complexes) - North American; South American; European; Middle Eastern; West African Subcomplex; Protocomplex Horn; Central African; South African; post-Soviet; South Asian and East Asian (Figure 1).

**Figure 1.** Map of regional security complexes at the beginning of the 21st century

Source: Buzan, Wæver 2003. in: Lipovac. V. Milan, 2016

The definition of the regional security complex evolved in the theory of Buzan et al. (Table 1).

**Table 1.** Genesis of the development of the term regional security complex

FOUNDER	(R)SC	DETERMINATION OF (REGIONAL) SECURITY COMPLEX
<b>Buzan, 1983.</b>	The first determination of the Security Complex (SC)	A security complex constitutes - "a group of states whose primary security concerns are so closely related that their national security cannot reasonably be considered in isolation from other (states)".
<b>Buzan, Wæver, De Vilde, 1998.</b>	Classic determination of RSC	The regional security complex represents - "a set of states whose main security perceptions and primary concerns are so interconnected that their national security problems cannot be reasonably analyzed and solved separately from other (states)".
<b>Buzan and Wæver, 2003.</b>	Revised definition of RSC	The regional security complex represents - "a set of units whose main processes of securitization and/or desecuritization are so connected that their security problems cannot be logically analyzed or solved separately from other (units)".

Source: Lipovac V. Milan, 2016:124.

Each RSC has four essential variables:

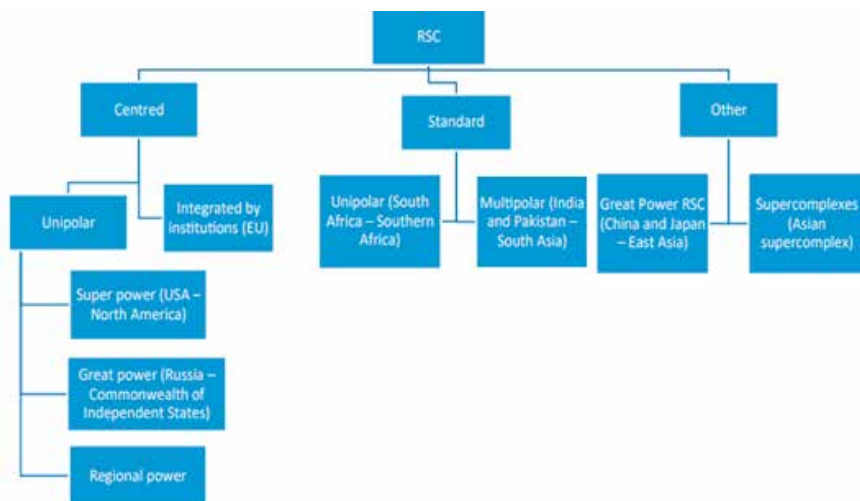
1. border, which distinguishes RSC from its neighbors,
2. an anarchic structure, which means that the RSC must be composed of two or more autonomous units,
3. polarity, which covers the distribution of power between units, and
4. social construction, which covers patterns of friendship and hostility between units (Buzan and Wæver, 2003).

In accordance with the above, there are three primary groups of RBK, with their subgroups (Figure 2).



When it comes to Africa, Buzan and Wæver in TRBK analyze and present it in the Cold War and post-Cold War period. The main difference in the presentation of Africa from the perspective of the TRBK in the mentioned periods is the perception of East and Central Africa as a possibility for the formation of a regional security complex (Figure 3).

**Figure 2.** *Types of Regional Security Complexes*

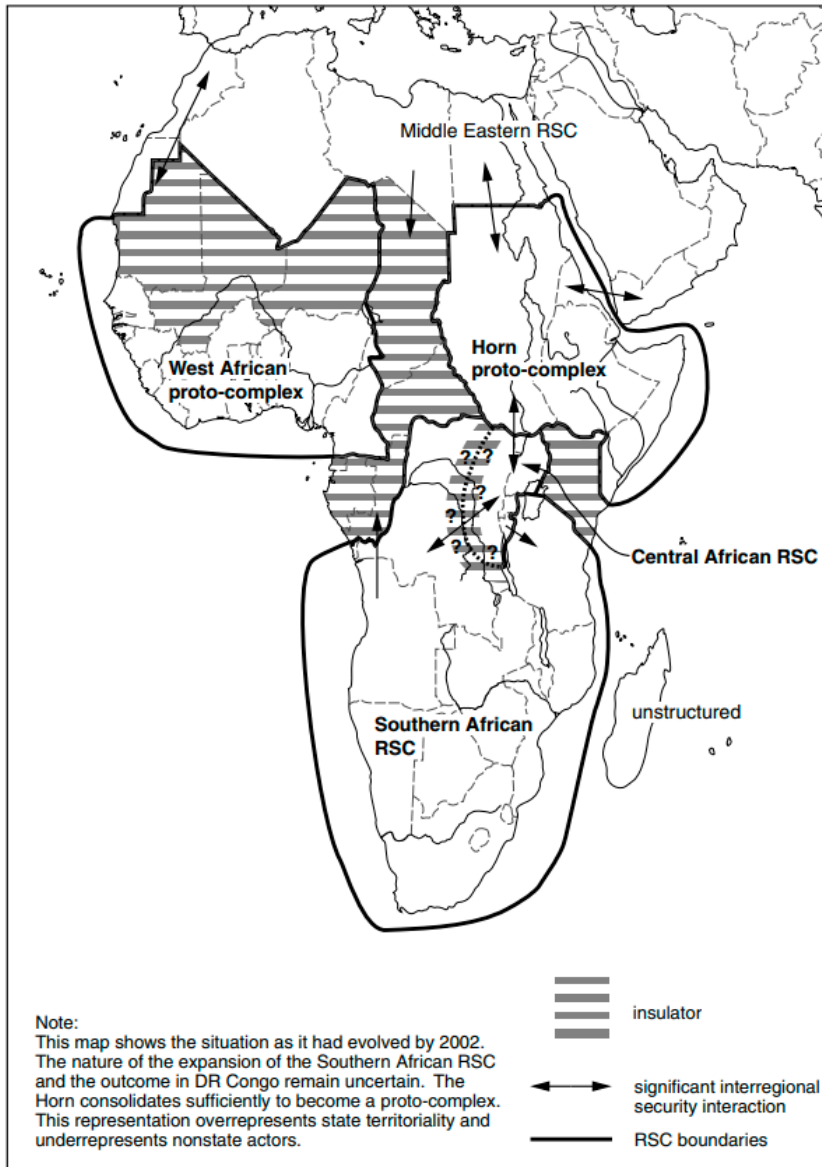


Source: Marton Varga, 2020

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In all of Buzan and Wæver's analyses, North African states enter the Middle East regional security complex and are not considered within Africa. The only essential regional security complex is the South African one. There are two proto-complexes (West African and Horn), while East and Central Africa is in the stage of forming a regional complex. From Figure 3, we can see that the so-called They think of the Sahel as insulators.

**Figure 3.** *Patterns of Regional Security in Africa Post-Cold War*



Source: Buzan and Weaver, 2003:231

The *subcomplex* essentially has the same definition and characteristics as the RBK, the only difference being that the subcomplex is firmly embedded in the larger RBK. The subcomplex has different patterns of security interaction, which are nevertheless encompassed by the broader patterns that determine the RSC as a whole. Thus, Buzan and Wæver cite the Levant (Egypt, Israel, Jordan, Lebanon, Syria) and the Gulf, i.e. the subcomplex of the Persian Gulf (Iraq, Iran) within the Middle Eastern RSC as the best example of a subcomplex. A *proto-complex* represents a region

that has the potential to develop into an RBK (for example: East African and West African proto-complex). (Buzan, Wæver, 2003).

The TRSC of Buzan and Wæver has opponents at the level of a general regional approach, as well as at the special level of a different consideration of security complexes and proto-complexes and sub-complexes, when it comes to Africa. We are interested in different views of the regional emergence of Africa.

The first significant deviation from the theory of Buzan and Weaver, when it comes to the regionalization of Africa, is made by Professor Stephen Burgess, who considers it justified to analyze the North African regional security complex on the African continent (Burgess, 2021). Although he conceives of it as a regional security complex, Burgess points out at least three different transgressions about the North African complex. The first is the conflict between Morocco and Algeria, historically, and especially over the Western Sahara, which Morocco has not recognized, but Algeria has. Another failure is the other states of the Maghreb, especially Libya and Tunisia, which have moved towards non-alignment and support for the Palestinian issue. Egypt and its conflict with Israel and its focus on the Middle East are special.

Another significant contribution to TRSC in the area of Africa was made by Marton Varga, analyzing the position of the Sahel, which Buzan and Weaver considered an insulator. In his work, Varga raises and elaborates three questions: 1) Is the Sahel Region a unit based on the theory of the regional security complex or not? 2) Which countries are part of the Sahel? And 3) Can the Sahel be treated as a region? (Varga, 2020).

In 2013, the UN presented the Sahel as a strip of Africa from east to west. and they described the region as: "The Sahel stretches from Mauritania to Eritrea, including Burkina Faso, Chad, Mali, Niger, Nigeria, Senegal and Sudan, a belt that divides the Sahara desert and the savannas to the south. (Varga, 2020). Another group of countries is mentioned in the UN Support Plan for the Sahel, i.e. which contains only the western countries of the zone (Figure 4): Senegal, Gambia, Mauritania, Mali, Burkina Faso, Guinea, Niger, Nigeria, Cameroon and Chad.

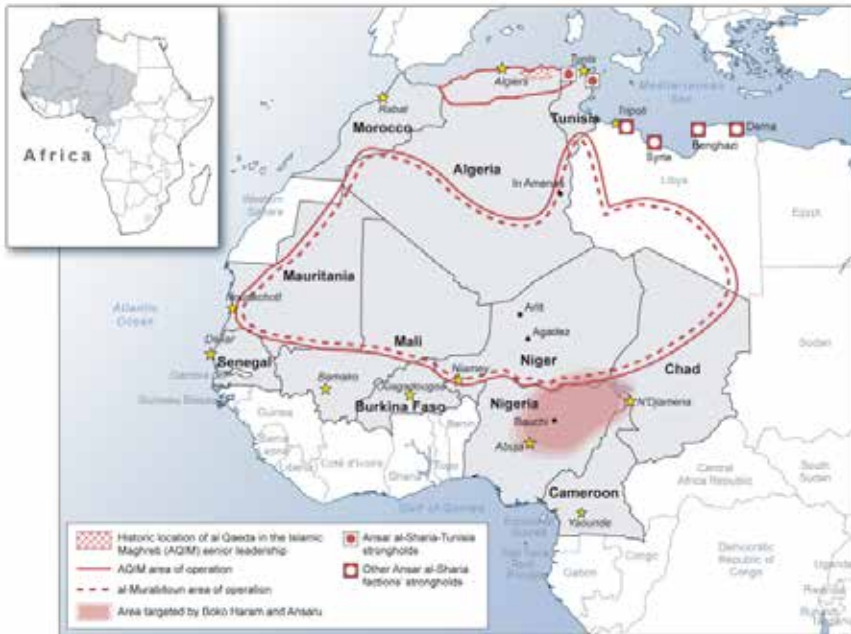
**Figure 4.** *The Sahel in the UN Support Plan*



Source: United Nations, May, 2018

However, as Varga observes, both the UN and individual countries, when referring to the term Sahel, most often mean five countries („G5 Sahel“): Burkina Faso, Mali, Niger, Nigeria and Mauritania (Varga, 2020:58). That focus on the five mentioned countries is largely connected with the key security threat in the Sahel, which primarily comes from terrorist groups, especially AQUIM, GASIM, Boko Haram... (Figure 5).

**Figure 5.** Key Terrorist Groups in Northwest Africa and Their Regions of Operation, 2009-2014



Source: United States Government Accountability Office, 'Combating Terrorism. U.S. Efforts in Northwest Africa Would Be Strengthened by Enhanced Program Management', June 2014

When asked whether the G5 Sahel meets the conditions to become some kind of entity by the RSCT, Varga gives the following position:

“The G5 Sahel countries have similar historical, economic, political and security backgrounds. This group means a much narrower unit than the other mentioned grouping. In the G5 we can find landlocked countries, except Mauritania. Their territory is defined not only by the Sahel, but also by the Sahara. As such, they have very similar economic and commercial opportunities. Their common historical background, as former French colonies, also defines their communities. An additional factor that connects these countries is a common enemy. The enemy is under the state level and not at the local but at the regional level. The enemies are international terrorist groups, especially AQUIM, which has played a decisive role in the region. Radical and terrorist groups in this region can be a strong challenger to the states of the peripheral area. States failed to fulfill their obligations and created an opportunity for extremists to integrate into society” (Varga, 2020:60).

## **Africa in the geopolitical practice of modern international relations**

Depicting Africa at the time of their Theory of Regional Security Complexes, Buzan and Weaver wrote: "A snapshot of Africa during almost any of the previous forty years would show a catalogue of wars, famines, plagues, mass population displacements, ruinous and barbaric political practices, and environmental despoliations. Africa is a pessimist's paradise, a place where the Hobbesian hypothesis that in the absence of a political Leviathan life for individuals will be nasty, brutish, and short seems to be widely manifest in everyday life. At the centre of the problem lies the postcolonial state, which was the price to be paid for rapid decolonisation". (Buzan and Viver, 2003:219).

Given that the focus of the analysis of countries, from the aspect of regional security complexes, is the fact that African countries have long been colonies of European powers. In this sense, liberation from colonialism did not fit in at all with the attempt to impose the European state model on African states. Therefore, Africa is riddled with internal conflicts of over 1,500 ethnic communities like no other macro-region of the world. The data of American political scientists, Jonathan Powell and Clayton Tyne, point to the fact that there were the most attempted and realized coups in Africa (Figure 6).

**Figure 6.** *Statistics of coups in Africa*

### **Afričke zemlje u kojima je bilo najviše državnih udara od 1952.**



Izvor: Jonathan Powell sa Univerziteta Centralna Florida i Clayton Tyne sa Univerziteta u Kentakiju

BBC

In addition to the above, Africa abounds in interstate conflicts, which are most often the product of unresolved issues of the aforementioned number of ethnic communities. Shortly after the departure of the colonial powers, Africa went to war among itself. The number of conflicts increased until the beginning of the 21st century, when the number of conflicts that take place on the continent in a given year drops from about 15 to eight in 2001. But from 2010, it begins to grow again, so the number of conflicts rises to 30 in 2020., and currently 35 different conflicts are taking place on the continent, the most in history. Most of them are not conflicts between states, but internal revolutions. This is not a historical novelty, although often these conflicts are conducted across state borders or even spill over from one state to another. Various paramilitaries mostly fight for reasons that are not always related to the desire to change borders.

On the other hand, the African countries freed from colonialism generally chose the path of non-alignment, that is, they joined the Movement of Non-Aligned Countries. However, even in the conditions of proclaimed non-alignment, African states were under strong pressure from the great powers USA, USSR and France.

For Geopolitics, professor Milomir Stepić says: "Geopolitics is a synthetic science that studies the role and interdependence of geographical location, natural resources, physical-geographical and socio-geographic factors, on the one hand, and political phenomena and processes, on the other" (Stepić, 2016:19).

In modern international relations, whose key characteristic is globalization, geopolitical processes in Africa came to a special expression in the second half of this century. Namely, the imagined and realized conflict of world powers, primarily the USA, Russia and China, which primarily took place in the macro-region of Eurasia, gradually expanded to other regions of the world, primarily to Africa. The aforementioned world powers have almost pushed out the influence of European countries from the area of Africa, although some EU members (France, first of all) are trying to maintain some kind of influence in some parts of the African continent. In the following, we will consider the influence of the USA, Russia and China in Africa, mainly after the Cold War. Of course, we will do it with a few key data, because a wider analysis requires a much larger space.

About the geopolitical influences in Africa in recent decades, analyzes are usually found under the title: "The conflict between the West, Russia and China on the African continent." Moreover, "when we say the West," as John Mearsheimer claims, "we mean the USA." (Mearsheimer, 2023).

The fact is that long after the Second World War, France had the greatest influence in Africa, especially in West and Central Africa. However, after the coup in Niger in 2023, and after Mali and Burkina Faso, France was forced to leave Niger as well. The era of French dominance in Africa is over.

The position of Professor Horace Campbell from Syracuse University on Democracy Now, a well-known American independent journalistic Internet platform, is very intriguing. He says about the situation in Africa after the coup in Niger: "It is interesting that the leaders of the last 11 coups in Africa were trained by from the USA, from the money that was supposed to be used for the fight against terrorism. That is why an investigation is needed into the role of the US in Mali, Burkina Faso, Niger, Guinea; the US AFRICOM command should be closed and US-Africa civil dialogue should be opened. It is important that even the officers in these countries,

treated and trained by the American army, understand that the imperialist domination of the USA, France and the EU simply functions on the status-quo relationship of the center-periphery, under which there is no place for any adequate development of African countries, while plundering the natural and human resources of the periphery maintains the development and supremacy of the capitalist center, that is, in this case, the suprematist colonial West” (<https://www.noviplamen.net> 01.09.2024).

The situation in this part of Africa (Sahel) became even more disastrous for the west (USA) when the rebels openly pressured US military forces to leave the base in Niger, which Russian special forces entered. About this, US Defense Minister Lloyd Austin, reassuring the American nation, says: “American soldiers are not in danger and that Russian forces are in a special complex and do not have access to American forces or equipment” (<https://nova.rs/vesti/svet/putinovi>, 01.09.2024).

After the Cold War, the USA entered the process of establishing a unipolar world with its own dominance. In this sense, using the position of a shaken Russia, after the collapse of the USSR and still undeveloped China, America consolidated its dominant influence on the Eurasian continent. Not infrequently, they strengthened their position as leaders in the world and asserted it by force (FR Yugoslavia, Afghanistan, Iraq, Libya, Syria...). The return of Russia (2008), as well as the sudden rise of China since 2013 (initiative - Belt and Road), pushed America to oppose those two powers even more decisively. In this sense, America has partly lost its influence in Africa. However, seeing the increasing influence of Russia and China on the African continent, the US is trying to improve its position in that region. Thus, in 2022, US President Biden held a summit with 55 leaders of African countries, promising them symbolic economic aid. On the other hand, US Secretary of State Blinken “fled” around the African continent (August 7, 2022). At the same time, the USA published a new strategic document for sub-Saharan Africa, from which we can only take a few pointers:

- Washington will have to work differently to help Africa with its infrastructure needs and that it is time to stop treating the continent as a geopolitical object, but rather as an independent player;
- in accordance with the 2022 US National Defense Strategy, the Pentagon to work with African partners “to expose and highlight the risks” of Chinese and Russian negative activities in Africa.
- Washington should also review ways to cooperate with African militaries, especially in programs that help build institutional capacity, fight corruption and promote reforms;
- Under the new strategy, the US will work to build Africa’s capacity to combat climate change with both governments and regional bodies, including the African Union, to support sustainable development, which includes digitizing financial services, investing in health systems and improving key supply chains goods;
- The document highlights: 1) China sees Africa “as an important arena for challenging the rules-based international order, advancing its own narrow commercial and geopolitical interests, undermining transparency and openness, and weakening US relations with African peoples and governments”; 2) Russia sees Africa as “a favorable environment for parastatals and private

military companies that often foment instability for strategic and financial gain.”

- Africa needs billions of dollars for roads, railways, dams and electricity, and in recent decades has received huge sums from China, which generally does not tie the giving of money to political or human rights conditions (<https://www.slobodnaevropa.org/a/afrika-sad-rusija/31978952.html>, 16.05.2024).

Russia and China individually, as well as jointly, above all within BRICS, unequivocally strengthen their influence in African countries. It can be said that Russia partly uses the legacy of the influence of the former USSR, while China has been doing this for the past two decades, primarily on the economic, but also on the military level.

Unlike the big European states, Russia was not a colonial power in Africa. In addition, during the Cold War, the Soviet Union significantly assisted the anti-colonial national liberation movements in the struggle for freedom and independence. In Africa in the post-colonial years and during the Cold War, the USSR provided opportunities for personnel education, trade projects and military training in solidarity. After the collapse of the USSR, the policy of Russian President Boris Yeltsin partly “abandoned” Africa, but the situation has changed significantly in the last decade.

In the new geopolitical conditions, Africa is becoming one of the priorities of Russian foreign policy. This means greater cooperation and strengthening of diplomatic relations, trade and investments. Especially since Russia is looking for alternative economic ties that completely bypass the European Union, especially after the start of the war in Ukraine in 2022. This also applies to food supply, industrial production, increased exports and the tourism industry. At the end of March 2023, the new Conception of Russia’s foreign policy was promulgated, which specifically calls for strengthening comprehensive mutually beneficial cooperation, increasing trade and investment with African governments and continental integration. “Russia stands in solidarity with African states in their search for a fairer polycentric peace and the elimination of social and economic inequality that is growing due to the sophisticated neo-colonial policies of some developed states towards Africa.” The Russian Federation intends to continue to support the formation of Africa as a recognizable and influential center of world development”, it was stated in the document (<https://www.politika.rs/sr/clanak/565417/Pogledi/Rat-za-Afriku>, 01.09.2024 ).

Recently, a Russia-Africa meeting was held in St. Petersburg, Vladimir Putin’s hometown, which showed that Russia has an increasing reputation in African countries, which is reflected in the following:

- Russia is ready to support African countries in their efforts towards BRICS and the Shanghai Cooperation Organization;
- Russia exported 11.5 million tons of grain to Africa in 2022 and delivered almost 10 million tons in the first half of this year. At the summit, President Putin promised up to 300,000 tons of grain, free of charge or under favorable conditions for the most vulnerable countries.
- Russia wrote off 23 billion dollars of African debt; an additional 90 million dollars is being negotiated to reduce the total debt of African countries. A targeted aid program worth 1.2 billion rubles (nearly \$11 million) will be created to fight infectious diseases.



- Russia's strategic direction in Africa is also energy. The main investments are in the oil, gas and atomic energy sector;
- For more than a decade, Moscow has been the largest seller of weapons for more than 18 African countries on the continent. Just under half of Africa's total military imports come from attractive, cheap Russian weapons with low production costs.
- "When Russia wins - Africa wins", was the conclusion of the meeting in St. Petersburg. Therefore, it should not be surprising that the majority of African countries were restrained in condemning Russia for the attack on Ukraine and that African countries do not want to impose sanctions on Russia. (<https://www.politika.rs/sr/clanak/565417/Pogledi/Rat-za-Afriku>, 01.09.2024).

It can be said that the beginning of significant cooperation between China and Africa begins in 2000, when the Forum on China-Africa Cooperation (FOCAC) was formed, founded on October 10, 2000, China's great rise in international relations especially is noticeable after the announcement of the "Belt and Road" initiative (2013), which developed into the largest macro-economic project in the history of mankind. Africa is on the "new silk road". Although some analysts emphasize the importance of East and Central Africa for China, Babić states that 49 African countries participate in the "Belt and Road" initiative (Babić, 2023). Trade exchange between China and Africa in 2022 will reach 254 billion dollars. In his analysis of China's role in Africa, Babić cites the following data:

"Promoting joint development is the true meaning of China-Africa cooperation, with a balance between business and friendship, profit and fairness." The two sides will focus on improving the quality of development, i.e. raising the standard of living in Africa and further aligning the goals of the Belt and Road Initiative with the goals of Agenda 2063 implemented by the African Union. Under the Belt and Road Initiative, China continues to help African countries upgrade their infrastructure to enhance the local capacity necessary for independent development. More than 10,000 kilometers of railways, almost 100,000 kilometers of roads, 1,000 bridges, 100 ports, 150,000 kilometers of communication networks and network services covering almost 700 million user terminals were built and modernized. At the moment, in terms of transport infrastructure, cargo transport is much more important than passenger transport. Better transport infrastructure enables easier import and export of goods to the African market. It also enables integration and consolidation within the African market. This phenomenon has positive effects for both China and Africa; It enables better competitiveness for Africa and easier business for China with a harmonized African market. China and Africa are natural partners due to the fact that only China can provide Africa with what Africa needs. The absence of political and economic conditioning by China also has a positive effect on the development of Africa. On the other hand, Africa is the only region that has the absorption capacity to accept such a large amount of Chinese investments" (Babić, 2023).

Of course, Western sources do not look kindly on China's growing influence in Africa, most often calling it "the creation of a debt trap" that China applies to African countries. However, in an extensive analysis (study) of the "Friedrich Neumann" Foundation, from 2022, the following data stand out:

“On the list of 17 criteria for the influence of China and the EU in Africa, China leads only in four criteria - makes decisions faster, implements projects faster, interferes less in internal affairs - and has slightly less scruples when it comes to using corruption networks than the EU. However, the EU has been largely complicit in illicit financial flows from Africa and tax avoidance practices, the study found. It is estimated that African countries lose 88.6 billion dollars a year in this way. The EU's position is “unilateral and discriminatory” and shifts the blame to developing countries, despite European countries such as Belgium, Germany, Spain and the UK being among the top ten destinations for illegal financial transfers from Africa. Annually, only 0.5% of illegal capital flight back to the continent. Thus, the study points out - In Africa, China builds roads, and the EU counts insects” (Rošćić and Švikovski, 2022).

## **Conclusion**

Theory and practice are two faces of one and the same reality, although they do not have to match completely. It only shows that international relations are a variable category that has no final outcome and is difficult to determine for a long period of time.

The theory of regional security complexes developed by researchers of the Copenhagen School of Security made a significant contribution to the understanding of international security. The fact is that this theory, on the example of the continent of Africa, has numerous specificities in relation to other regions of the world. In this sense, TRBK on the example of Africa suffers both general and individual influences and efforts for theoretical development.

The practice of international relations and geopolitical processes, especially in Africa, indicates completely new trends compared to the recent past. Namely, the fact is that in the conflicts of the world powers, which were primarily focused on Eurasia, there is a shift to other parts of the world, primarily to Africa.

Africa is a continent that has completely freed itself from colonialism, in just over half a century. That process did not go easily, on the contrary, it was burdened by numerous internal and interstate conflicts, as in few other regions of the world. Freed from colonialism, African countries joined the Non-Aligned Movement. However, it is evident that the influence of some of the world powers is felt in almost every country in Africa.

When it comes to the influence of world powers on the geopolitical processes and determinations of African countries, there are several important facts: 1) European countries, and especially France, have lost the primacy of influence in Africa, 2) With its performance as a world hegemon in the creation of a unipolar world, the USA is also began to lose their primacy in Africa, 3) Russia and China have the greatest influence in Africa and that influence is constantly growing. Thus, African states are increasingly escaping the dominance of Western neoliberalism and attempts to create a unipolar world, and support multipolarism and social constructivism applied by Russia and China, enabling them to establish a more favorable place in the world distribution as the “global south”.

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# Private Military and Security Companies in the Context of Socio-Economic and Political Development of African Countries

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**Abstract:** *Throughout the period of independent development, most African countries have experienced military and political instability and, simultaneously, as a consequence and as a cause, a rise in crime. The hope that national security forces would ensure order and promote peaceful development has been largely lost. Instead, corruption flourishes in the army and police, and many armies have become nothing more than attributes of annual Independence Day parades and demonstrate astonishing incompetence in performing even the most basic military tasks. Currently, no state in Africa has the potential to effectively control the socio-political situation in its own territory, and is therefore forced to delegate these powers to other entities, including private military companies (PMCs) and private security companies (PSCs), which are gaining de facto legitimacy and are gradually occupying an increasingly important place in today's security structures. The trend towards increasing military-political instability and crime rates, as well as the spread of terrorism in a number of countries on the continent, determines the increasing role of PMCs and PSCs not only as effective additions to state security structures, but also as specialized segments of the service sector, making a significant contribution – in the form of taxes – to national GDPs. Given the current African realities, it can be assumed with a fair degree of certainty that the continent's governments will increasingly turn to private security and military services in the near future. The present paper employs the method of systemic analysis to examine the role of private military and security companies in the socio-economic life of African countries.*

**Keywords:** *Africa, private security companies, army, socio-economic problems, political instability*

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## **Introduction**

During the entire period of independent development, most African countries experienced military and political instability and, simultaneously, as a consequence and as a cause, an increase in crime. Moreover, security for many Africans has become not the rule, but an exception.

In the years preceding independence, the level of security was higher even for Africans, although the measures aimed at its implementation were primarily aimed at protecting the lives and property of European colonial administrators. Although the colonial security agencies – the police, gendarmerie and armed forces (AF) – could be accused of bias against Africans, a tendency to take punitive measures and other abuses, they could not be denied professionalism. Both the European officer corps and the units recruited from among African natives were distinguished by sufficient, although often harshly imposed, discipline. Moreover, they received regular salaries, were adequately equipped and had guaranteed pension payments. It was precisely thanks to their military skills that during the first postcolonial years these former colonial security structures played a critical role either in stabilizing the political situation or, on the contrary, in destabilizing it.

However, the capabilities of the national police and armed forces were rapidly shrinking due to the exodus of European officers and the appointment in their place of insufficiently trained local “sergeants”, due to the disappearance of the former orderly army hierarchy and, most importantly, due to the reduction in funding, which inevitably led to a decline in discipline, desertion, a tendency to looting and to changing sides during the wartime.

Thus, already in the early postcolonial years, the hope that national security forces would maintain order and promote peaceful nation-building was lost. The vast majority of African armies today are less combat-ready than they were half a century ago, but they compensate for their lack of professionalism in other areas: rarely remaining neutral or truly loyal to the regime, the military in Africa has planned and carried out some 150 coups and attempted coups. Moreover, due to tribal prejudices, political manipulation of the armed forces, and poor conditions of service, African armies have proven to be no less a threat to the security of citizens than rebel groups. An example of this is the massacre of civilians – alleged Boko Haram sympathizers – perpetrated by the military in the northern states of Nigeria in 2009, which led to a surge in Islamic radicalism and a mass influx of young people into the terrorist group.

Perhaps the most important consequence of the degeneration of African armed forces is the inadequate behavior of African peacekeeping contingents in conflict zones. The problem is that no amount of goodwill, even if it exists, can compensate for the lack of training and the absence of equipment and logistics. This is partly why the implementation of the concept of “African solutions to African problems” remains illusory.

Internal conflicts caused by political instability and the growing terrorist threat have been driving African countries to increase their military power. However, despite the overall increase in funding for African armies in recent years, the continent accounts for only about 2% of global military spending (Chapter One: Defence and military analysis, 2024). Countries of North Africa are paying the greatest attention to the development of their armed forces and military industry; Algeria, Egypt and

Morocco particularly focus on strengthening their armed forces by increasing the import of weapons and military equipment, to a certain extent provoking an arms race on the continent.

Employing the method of systemic analysis, the present paper examines the role of private military and security companies in the socio-economic life of African countries.

### **Private Security and Military Companies**

The weakness and incompetence of state security forces have meant that citizens, businesses and even governments have no other recourse to ensure their safety than to turn to private security companies (PSCs). This is most evident in South Africa, where frustration with the poor quality of police work has forced residents of wealthy areas to turn to countless private security companies. Even residents of poor areas prefer to turn to private structures rather than rely on the weak state police service (Denisova, 2020, pp. 195–203).

One way or another, the privatization of security services is becoming one of the main trends of our time. Governments still rely on their armed forces to protect borders and vital interests, but since the end of the Cold War, they have increasingly begun to turn to new players in the security sphere – PSCs and private military companies (PMCs) – for aid. PSCs are usually hired by banks, various companies, including TNCs, humanitarian organizations, and individuals who fear for their lives.

In turn, PMCs are usually hired by governments, and their activities are directed against various types of rebels, separatists, criminal groups and other armed formations that oppose the authorities. However, PMCs may also be employed by rebel organizations to protect themselves from government's military contractors or even to overthrow the government.

The use of private military force in Africa is not a new phenomenon: armed mercenaries were actively used by colonial authorities in various parts of the continent to suppress national liberation movements. It should be noted that mercenaries and PSCs are different phenomena, the similarity between which is that both “work” for money, but a mercenary is an individual who does not advertise his activities, at least because in most countries it is declared illegal, while PSCs are legal entities that advertise their activities in order to attract more clients. PSCs are obliged to meet legal requirements, such as registration or licensing, and ensure transparency, e.g. by providing clients with signed contracts and information about employees, which creates the opportunity to control their activities. If their “work” does not meet standards and requirements or violates the law, the contract can be terminated. The existence of documents facilitates – in the event of a violation of the law by a PSC or a PMC – an investigation of their activities by law enforcement agencies, as shown, in particular, by the trials of Blackwater employees for their actions in Iraq, which created a precedent in international law (Dickinson, 2011, p. 45). Such requirements for private security structures are accepted all over the world, and Africa is no exception.

Since most definitions of the state focus on its monopoly on the legal use of force, it is not surprising that the rapid growth of PSCs<sup>2</sup> is interpreted as a weakening of state power. This leads to moral condemnation of the use of PSCs and PMCs, which

2 In 2019, there were more than 3,000 PSCs in the world with a total revenue of approximately \$400 billion (Ponomarev, 2019, p. 27).

are often perceived as a form of “private power” and classified as “illegal” organizations similar to mafias or anti-government groups (Hall and Biersteker, 2002). However, while private security may, under certain circumstances, engage in illegal activities, the denial of the distinction between mercenaries and corporate private security structures provides an unduly narrow view of the scope of security privatization, ignoring the vast majority of activities that are entirely legal and often carried out in parallel or in cooperation with state security services.

The proliferation of PSCs has always been viewed differently in different countries. Debates about the legitimacy of these companies began in the 2000s; since then, many different international and national laws and regulations have been adopted, setting out the rules by which PSCs and PMCs must operate, but African governments have so far lacked the political will to properly monitor their implementation.

Over the last two or three decades, there has been a boom in the development of private military structures in the security sector both in the world in general and in Africa in particular. Among the factors contributing to the spread of PMCs and PSCs are the reduction of national armed forces and the surplus of demobilized military personnel; high unemployment and the employment opportunities that PMCs and PSCs provide; the expansion of transnational corporations that require their services; the spread of non-traditional security threats – terrorism, maritime piracy, natural disasters, drug trafficking, etc. Quite often, PSCs offer extended services in the field of security, such as preventing criminal acts, fires, thefts, etc., but they are classified as “non-lethal” – unlike PMCs, whose participation in armed conflicts is undesirable, but is not prohibited by the so-called Montreux Document “On pertinent international legal obligations and good practices for States related to operations of private military and security companies during armed conflict” (The Montreux Document, 2008), adopted on September 17, 2008 and still remaining the only international document of this kind.

One of the most privatized security systems in the world was developed in South Africa in the post-apartheid period, i.e. after 1994. The private security sector ceased to be regarded by the government as illegitimate and potentially politically subversive, as it was quickly integrated into the public-private partnership structure and began to be perceived as crucial to the maintenance of law and order. The context for the large-scale expansion of private security services in South Africa was the transition to black majority rule, accompanied the growth in crime rates and rising fears among the white minority for their lives and property. In 1994, the number of private security personnel outnumbered the police three to one; between 1997 and 2000, the total number of security personnel (excluding the army) increased from 115,000 to 166,000 (Minnaar, 2004), with dozens of white officers leaving the public sector and integrating into the private sector, and black South Africans gaining employment and career opportunities in the security forces.

Although many leaders of the ruling South African party – African National Congress (ANC) – doubted the commitment of PSCs to “the cause of reducing crime”, and the police, which had limited resources compared to private companies that had not only new patrol cars but also the latest surveillance and communication equipment, regarded the proliferation of PSCs as a lack of confidence in their own ability to “protect the lives and property of citizens”, skepticism about the phenom-

enon of private security arose also due to the fact that private companies were mainly white-owned, employed mainly low-paid blacks, and the latter's protection of "white wealth" was seen as an obstacle to the creation of a "new" South Africa. Moreover, many PSCs were run by apartheid-era employees of the repressive apparatus, intelligence, and the police, which naturally caused mistrust. There have also been concerns that foreign participation in the sector could be used to destabilize the political situation due to the links of some PSCs and PMCs to Western intelligence agencies: allegedly private enterprises could easily be used for espionage activities (Minnaar, 2004). It is largely for this reason that South Africa's 2001 Private Security Industry Regulation Act stipulates that all managers of PSCs must be South African citizens (Kincade, 2013), although this is constantly violated. Meanwhile, the Act has led to the creation of a tightly regulated and effective security industry (Gumedze, 2020).

As in South Africa, the level of trust of citizens in PSCs and PMCs in Nigeria is higher than in the army and police. The following types of private security services are widespread in the country: temporary security, i.e. ensuring security during mass events, reconstruction of buildings, construction of small facilities, etc.; provision of "uniformed security guards" to prevent robberies, arson and other similar actions; ensuring security, including technical, at construction sites; protection of the management of enterprises and organizations; ensuring security "at the workplace", i.e. drawing up evacuation plans, monitoring the serviceability of fire extinguishers, checking first aid kits, floodlights, radios and other security and communication equipment, as well as the condition of premises and mechanized equipment; patrolling the territories of industrial facilities; consulting on security issues, etc. In the Niger Delta, for example, since the 2000s, dozens of PSCs have been serving their clients from the oil and gas industry (Iyare, 2009).

Overall, there are about 300 PSCs and PMCs in Nigeria, who usually possess modern equipment – satellite tracking, alarm systems and armored vehicles and who offer a wide range of services ranging from participation in combat operations and strategic planning to reconnaissance and troop training. However, the level of security in the country is not improving: vandalism, theft of oil from oil pipelines and clashes between local residents and security forces do not stop. Perhaps because, as was the case with Boko Haram, in the fight against which the government actively involved PMCs – at least 3 with a total of about 150 fighters, mercenaries often changed sides. As a result, the Nigerian government began to limit agreements with military contractors exclusively to training soldiers and installing equipment, which leads to less political risks than the participation of PMCs in actual combat (Abdullahi, 2022).

Meanwhile, in 2022, the governor of Borno State, which had been at the epicenter of Boko Haram attacks for many years, called on the government to hire a PMC. It should be noted that back in 2014, the administration of then-President Goodluck Jonathan hired South African PMCs *Conella Services Ltd*, *Pilgrims Africa* and *Specialized Tasks, Training, Equipment and Protection (STTEP)* to search for and rescue schoolgirls kidnapped in Chibok. The number of "mercenaries" then reached approximately 150. Later, their mandate was extended to training soldiers of the Nigerian Armed Forces for operations against Boko Haram. For example, *STTEP* participated in training and consulting fighters of the 72nd Mobile Strike Force of the Nigerian Armed Forces. The army unit later became known for its use of South



African-made REVA Mine Resistant Ambush Protected (MRAP) vehicles armed with heavy machine guns and its “relentless pursuit” doctrine, which enabled it to push the Islamists back into forest bases in 2015. According to the *STTEP commander* Eeben Barlow, the unit had its own aviation, intelligence, communications, logistics and other related combat support elements (Abdullahi, 2022).

However, the agreement was interrupted due to disagreements between the government of Muhammadu Buhari and the PMC: according to the official version, due to excessive control of the Nigerian military over the activities of *STTEP*, whose employees left the conflict zone with all their equipment while the offensive was still ongoing, which once again demonstrates the unreliability of relying on “free guns” who have the right to terminate the contract if they are not satisfied with any of the conditions.

However, in 2017–2018, Abuja contracted the Israeli company *Four-Troop*, founded by veterans of the Israeli special forces, to train Nigerian Air Force’s special forces in counterterrorism, asymmetric warfare, and airport security.

In the summer of 2021, the Nigerian government launched a project called the Integrated National Security and Waterways Protection Infrastructure, also known as the *Deep Blue*. Its goal was to protect the country’s territorial waters and the Gulf of Guinea from maritime piracy, which posed a serious threat to ships and sailors. The contract for the implementation of this \$195 million project was signed with another Israeli PMC – *HLSI Security Systems and Technologies Limited*, and also provided for the training of Nigerian special forces. However, it soon became clear that the project was part of a large-scale corruption scheme involving high-ranking military officials, so it became the subject of a parliamentary investigation that has not yet been completed.

Thus, while the Nigerian military and government have often opposed the use of foreign contractors, the situation on the ground appears to be quite different, which may be due to the restriction of contracts to military training. In February 2022, Nigerian Defense Minister Lucky Irabor opposed the involvement of private companies in defense activities, insisting that the national military should be entrusted with the job. However, the Nigerian military leadership was forced to admit that PMCs are cheaper than maintaining a standing army and they operate more effectively (Abdullahi, 2022).

Turning to Kenya, there are about 2 thousand PSCs and PMCs operating in the country, which employ more than 300 thousand people; large businessmen and politicians rely on these private companies to ensure their security. Some of these companies, such as *G4S Kenya Contacts*, *Ultimate security limited*, *Securix Agencies*, *Wells Fargo Security Firm*, *Radar Security Limited*, and *Bob Morgan Security Ltd* have been in the market for several decades already. The demand for PSC services in the country increased significantly after the terrorist attacks on the US embassy in Nairobi in 1998 and on a shopping mall in 2013. The highest concentration of PSCs is in the capital, where their number reaches several hundred. Their main clients are government agencies, embassies, banks, supermarkets, commercial companies, international organizations, NGOs and refugee camps (The Editors of the *Sabonews*, 2023a).

Some Kenyan companies have begun to expand their activities to neighboring countries, primarily Tanzania, Uganda, and Rwanda, where the private security mar-

ket has been expanding significantly in recent years. Furthermore, in the DRC, Kenyan PSCs and PMCs actively cooperate with mining companies, often having a stake in their business (Riunga, 2019).

Tanzania enjoys a higher level of security than other East African countries, and its armed forces are among the best trained and disciplined in the region. As a result, PSCs are less common in Tanzania than in neighboring countries. However, porous borders increase the threat of terrorism and criminal groups from outside the country. The police often lack the ability to prevent crime, and it is this security vacuum that PSCs are gradually beginning to fill here as well (The Editors of the Sabonews, 2023b).

### **Pmcs in African Conflicts**

The involvement of PMCs in African conflicts, starting with the 1960 Congo War, have always been controversial. On the one hand, one of the most famous African PMCs, *Executive Outcomes* (EO), which mainly consisted of former South African special forces and operated for many years in the vast region stretching from the Mano River and Angola to the Great African Lakes, was quite effective when it was hired in 1993 by MPLA to fight UNITA led by Jonas Savimbi. Acting under a contract with the government of Sierra Leone, in 1995 EO fighters were able to prevent the destruction of the country's capital, Freetown, by the rebel Revolutionary United Front (RUF); later, under pressure from the world community, primarily the UK, Freetown tore apart its contract with EO, which was replaced by a UN peacekeeping mission. After that RUF fighters not only occupied the capital, but also captured several hundred peacekeepers. These events remain examples of the high level of effectiveness of PMCs compared to regular armies and peacekeeping missions.

On the other hand, both EO and the British PMC *Sandline International*, which London later invited to Sierra Leone, were involved in human rights violations, violence against civilians, ignoring the UN embargo on arms supplies to Sierra Leone and, most importantly, in the plundering of the country's natural resources, since a part of the \$36 million stipulated in the contract that EO was to receive from the Sierra Leonean government was paid in kind with a stake in the extraction of diamonds (Iyare, 2009). At the same time, the level of security in the country did not increase, since various PMCs, tribal militias, army units and criminal groups continued to fight among themselves for access to minerals, drawing the local population into the clashes.

As for the governments of African states engulfed in conflict, often the provision of licenses for mining and other activities is the only way for them to "pay" for the services of PMCs, whose widespread involvement in armed conflicts is also connected with the reluctance of many Western countries to listen to the UN's calls to deploy their peacekeepers to unstable zones. There have even been opinions that it is necessary to gather the most effective PMCs and pay them a billion dollars so that they would put an end to all wars in Africa. But the problem is that it is not profitable for them to stop wars, because, firstly, they may be left without highly paid work, because guard services are not as well paid as military activities; secondly, in a conflict zone, PMCs can engage in a wide variety of activities with impunity, both legal and illegal – smuggling, drug trafficking, weapons, etc., thus undermining both the economy and the political situation in the client state.

However, a more compelling argument for not using PMCs is that by hiring a mercenary army one effectively exchanges what remains of a semblance of independence for privatized security, which severely damages national sovereignty.

Regulation of PMCs remains problematic throughout the world. Firstly, because they usually have better military skills than regular army soldiers and can easily defend their, primarily material, interests if they wish; secondly, according to the 1949 Geneva Convention, they cannot be treated as prisoners of war or charged in the International Criminal Court. With the exception of South Africa, which took tough measures in accordance with the 1998 Foreign Military Assistance Regulation, which led, in particular, to the formal liquidation of EO that same year, other countries treat the activities of mercenary armies, including illegal ones, leniently. However, EO simply left the territory of South Africa and continued to “work” under a different name. For example, already in the 2010s, the PMC *Sterling Corporate Services*, whose EO roots could easily be traced, was operating in Somalia and Eritrea (Powell & Capazorio, 2012).

PMC employees participate not only in security operations – under contract with governments and the UN – but also in combat. This has raised questions about the behavior of mercenaries, their relations with civilians, their ability to maintain neutrality and adhere to the principles of international humanitarian law. For instance, in the late 2010s, the Mozambican government began to hire foreign PMCs to suppress the Islamist group Ansar al-Sunna, which was operating in the north of the country in the province of Cabo Delgado. In September 2020, the Mozambican authorities contracted the South African *Dyck Advisory Group* (DAG), which soon deployed four civilian helicopters and several dozen people in Pemba, the capital of Cabo Delgado. DAG conducted aerial attacks, providing cover for the Mozambican army, which launched an offensive against the Islamists in October 2020, but achieved little success (VOA, 2020). In February 2021, the FRELIMO government awarded a contract to a consortium formed by the *Paramount Group*, a South African-based PMC, and Dubai-based *Burnham Global*. However, like the actions of the police and the army, the PMC presence in Cabo Delgado was not enough to stop or contain the Islamist attacks. Instead, as a result of the actions of the PMCs involved in the conflict, including the carpet bombing that killed hundreds of civilians, the conflict itself even escalated (CDD, 2022, p. 14).

PMCs are often accused of fueling conflicts, employing child soldiers, etc. However, the reality is that in almost all cases, PMCs that provide military or security services are specifically invited by African governments to maintain political stability and law and order, i.e. to fill gaps in national security systems (Brooks, 2002). There is a major reason for this: private companies are considered more reliable and politically neutral than state security bodies in African countries, many of which have experienced coups organized by career military personnel or even presidential guard. Therefore, modern African leaders are forced to facilitate the privatization of security on both national and commercial levels.

## Conclusion

The complex nature of the security situation in Africa and the speed with which most states of the continent come to face governance and other crises force them to resort to the services of PSCs and PMCs to ensure regime survival. Meanwhile, pri-

vate companies often become both a blessing and a burden for weak states, as they may also engage in anti-state activities, including arms smuggling.

The UN takes an uncompromising position on PMCs, equating them with mercenaries, and this “moral” position would be commendable if there were an alternative to this sole effective source of security on the African continent. On the other hand, indeed, PMCs need tighter control from the state in whose territory they operate. Then they could significantly contribute to supplementing the potential of national armed forces. The introduction of a total ban on private military services in view of the ever-growing demand for them would simply run counter to African realities.

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# The “Afrikaner Question” in South Africa: From Messianism to Political Escapism

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**Abstract:** *The term “apartheid,” originating from the Afrikaner nationalist movement, has become ingrained in global political discourse. Throughout the latter half of the 20th century, apartheid sought to position itself as a distinctive “third way” in the ideological contest between communism and liberal democracy. This ambition was rooted in the radical nationalist ideologies that dominated much of the early 20th century in Western nations. Apartheid, while primarily a domestic policy, was also projected by its proponents as a global model for racial and cultural governance. However, the system ultimately failed to gain international legitimacy and collapsed under the weight of internal resistance and external pressures. The post-apartheid era ushered in a new chapter in South Africa’s history, marked by profound changes within the Afrikaner community. The end of apartheid represented not only a political defeat but also a cultural and existential crisis for many Afrikaners, who had long viewed themselves as the custodians of a divinely ordained social order. This paper explores the Afrikaner transition from a messianic worldview—characterized by a belief in their unique role in history and destiny—to a form of political escapism, where segments of the community retreated into self-imposed political isolation, creating independent socio-economic structures to preserve their identity and autonomy. This study utilizes a qualitative approach, including participant observation, semi-structured interviews, and field research, alongside a detailed analysis of the Afrikaner institutions that emerged in the wake of apartheid, such as Orania and the Solidarity Movement. These institutions reflect the diverse responses within the Afrikaner community to the challenges posed by South Africa’s new democratic order. The research aims to shed light on the underlying motivations, ideological shifts, and practical outcomes of these divergent paths, offering insights into the contemporary relevance of the “Afrikaner Question” in South Africa’s evolving political landscape.*

**Keywords:** South Africa, Afrikaners, Messianism, Isolationism, Orania

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## **Introduction**

The dismantling of apartheid in 1994 marked a pivotal moment in both South African and global history. For nearly half a century, apartheid had defined South Africa's political system, institutionalizing racial segregation and white supremacy under the guise of maintaining cultural purity and national security. The Afrikaner community, the primary architect and beneficiary of this system, faced an unprecedented crisis in the wake of apartheid's collapse. The end of apartheid was not only the demise of a political system but also a profound challenge to the Afrikaner identity, which had been closely tied to the idea of a unique, divinely sanctioned role in governing South Africa.

The transition from apartheid to a democratic South Africa led to significant shifts within the Afrikaner community. While some Afrikaners embraced the new political order, seeking integration into broader South African society, others chose a different path. This paper explores the complex and multifaceted responses within conservative Afrikaners, focusing on the shift from a messianic ideology, which had justified apartheid, to a form of political escapism characterized by self-isolation and the creation of autonomous institutions. The study aims to understand the motivations behind these choices, the challenges faced by those who opted for isolation, and the broader implications for South African politics and society.

## **Methodology**

This academic study is based on qualitative research methods, combining participant observation, semi-structured interviews, and field research. Participant observation over several years enabled the author to gain a deep understanding of the Afrikaner community's social dynamics and political changes. This long-term immersion provided a first-hand view of the community's internal transformations and their interactions with broader South African society. A short-term field study in 2020, though brief, was essential in capturing a critical moment in the community's development. During this period, the author conducted semi-structured interviews with key community leaders and influential members, gathering detailed, nuanced perspectives on the Afrikaners' shift toward self-reliance and political withdrawal. This methodological approach of combining long-term observation with targeted fieldwork ensures a comprehensive understanding of both the historical and current trajectory of the Afrikaner community.

Artificial intelligence (AI) tools were used to process information and assist with editing, improving the accuracy, clarity, and consistency of the analysis. These tools streamlined data organization, helping to review large volumes of qualitative data and refine the research findings for a more structured presentation.

The focus of this article is on a little-studied issue: how the Afrikaner community, which once controlled all major socio-political and economic sectors in South Africa, effectively disappeared from the political landscape after 1994, while retaining or even increasing their economic capital. Historical examples of such transformations are well known. For instance, after its defeat in World War II, Germany lost all of its foreign policy ambitions, and for many decades afterward, the country was often referred to as an "economic giant, but a political dwarf." A similar phe-

nomenon occurred with the Afrikaner community, which abandoned its global and messianic ideas.

In one of the conversations, it was suggested that Afrikaners used to build homelands for everyone, but themselves and it's the time to build the home for Afrikaners. While one may disagree with the first part of this statement, it is evident that the conservative part of Afrikaners has chosen a path of autarky, relying on their own resources. The leadership of Orania frequently emphasizes that they do not use a single cent of government funds, and all development is carried out through their own efforts. Such an autarkic model has both advantages and disadvantages, which will be discussed in more detail in this article. However, the author can assert that the conservative Afrikaner circles have succeeded in constructing a development model with clear and achievable future goals, unlike many other South African communities.

## **The Rise of Afrikaner Messianism**

### ***The Global Messianic Idea in the Early 20th Century***

Messianism, as a political and religious phenomenon, has been a powerful force in shaping ideologies and movements throughout history. The concept of a messiah, a savior or redeemer, has often been invoked by political movements seeking to justify their actions and policies as part of a larger, divinely ordained plan. In the early 20th century, many nationalist movements across Europe and the Western world adopted messianic rhetoric, positioning themselves as the defenders of their nations and cultures against perceived threats, whether from external enemies or internal subversion.

The aftermath of World War I, with its profound social, economic, and political upheavals, provided fertile ground for the emergence of messianic ideologies. In countries like Germany and Italy, nationalist movements that combined messianic rhetoric with radical political agendas gained significant traction. These movements framed their struggles in quasi-religious terms, presenting themselves as the vanguard of a new world order that would restore their nations to greatness. This messianic nationalism was not confined to Europe but also influenced nationalist movements in other parts of the world, including South Africa.

### ***The Appeal of Messianism to Afrikaners***

The Afrikaner nationalist movement was deeply influenced by the global currents of messianism that characterized the early 20th century, which later merged with the idea of establishing a national state. The Afrikaners, primarily descendants of Dutch settlers in South Africa, had long viewed themselves as a distinct and chosen people, set apart by their race, language, culture, and religion. This sense of exceptionalism was reinforced by their Calvinist faith, which emphasized predestination and the belief that they were divinely chosen to fulfil a special role in South Africa (Giliomé, 2003).

The messianic mission resonated strongly with the Afrikaner community, particularly in the context of their historical experiences of conflict and survival. The Great Trek of the 1830s, when Afrikaner Voortrekkers migrated inland to escape



British colonial rule, was framed as a journey of divine providence, akin to the biblical Exodus. Subsequent conflicts with indigenous African communities and the British further reinforced the belief that Afrikaners were engaged in a righteous struggle for survival and self-determination.

The idea of re-establishing an Afrikaner nation-state emerged almost immediately after the defeat of the Boer republics in the Second Anglo-Boer War and the incorporation of the Transvaal and the Orange Free State into the British Empire. Its proponents were typically radical Boers who refused to be co-opted into the British political system, despite the fact that the British crown extended such an opportunity<sup>2</sup>. However, attempts to stage an uprising against the British, especially during World War I, were unsuccessful. A notable failure was the 1914 Maritz rebellion, where a planned insurrection against British rule was swiftly suppressed by imperial forces.

With armed rebellion proving futile, the Afrikaner political elite shifted their focus from open resistance to a more strategic approach – achieving self-determination not by carving out a separate territory, but by seizing control of the entire country. This was achieved through self-promotion and infiltration into imperial political institutions. A key example of this strategy was the *Broederbond* (Brotherhood), a secretive organization founded in 1918, which became a powerful political and economic force.

The *Broederbond* played a pivotal role in shaping Afrikaner nationalism, blending the messianic idea of a chosen people with the practical goal of creating an Afrikaner-dominated state. Over time, the *Broederbond's* influence grew, and its members secured political control with the National Party's victory in 1948. All South African presidents from 1948 to 1994 were members of this organization. It can be argued that the *Broederbond*, rather than the National Party itself, was where the key decisions regarding the country's future were made.

In this way, the fusion of Afrikaner messianism with the drive for national statehood not only helped to solidify Afrikaner identity but also shaped the political landscape of South Africa for much of the 20th century. This belief in a messianic mission was used to justify the implementation of apartheid, a system that was presented not merely as a pragmatic solution to racial tensions but as a moral and religious duty. The Afrikaners' journey from a community with a sense of divine mission to the architects of apartheid reflects the complexity of their struggle for power, which was both ideological and deeply practical.

This fusion of messianism and the drive for national statehood reflects a broader trend in nationalist movements of the time, where ideological and religious motivations intertwined with the pursuit of political and economic control. For the Afrikaners, this belief in their unique destiny as a chosen people, combined with their quest for self-determination, became a central tenet of their national identity (Nelson, 2003). Their historical experiences, both of suffering and triumph, helped cement the narrative of a community tasked with a divinely ordained mission to preserve and protect their culture, even if it meant the exclusion and subjugation of others.

2 Here, one can recall Jan Smuts, a Boer general who rose to become one of the highest-ranking military officers of the British Empire. However, some critics claimed that Smuts, by sending British soldiers into the carnage of the World Wars, was exacting revenge for the concentration camps and hardships endured by the Boers during the Anglo-Boer War (author's note).

### ***The Role of Messianism in Shaping Afrikaner Nationalism***

Messianism played a pivotal role in shaping Afrikaner nationalism, influencing both ideology and policies. The forefathers of the Afrikaner identity, such as President Paul Kruger and “the prophet” Siener van Rensburg, believed in a messianic destiny for the Afrikaners (Cauthen, 1997). Subsequent leaders of the Broederbond and the National Party, many of whom were deeply religious, saw themselves as protectors of Afrikaner identity and Western civilization in Africa. They framed apartheid as a necessary safeguard to maintain the purity and integrity of the Afrikaner people, fearing that racial mixing would lead to South Africa’s moral and cultural decline.

Underlying this resistance to integration was a profound fear of being absorbed into the black majority. The fear of extinction became a driving force behind many restrictive measures against the African population, counterbalanced by a desire for power and profit. Exploiting the African majority served both political and economic interests. Political disenfranchisement of the black population enabled a grossly inequitable redistribution of resources and finances in favor of the white minority. Over six decades, this economic disparity allowed the Afrikaner community to narrow the income gap between themselves and Anglo-South Africans, the country’s second-largest white demographic group.

The Afrikaner nationalist movement’s messianic worldview extended beyond economic and political power; it sought to establish a new social order based on a strict racial hierarchy with Afrikaners at the top. This vision was strongly reinforced by the Dutch Reformed Church, which provided theological justification for apartheid by arguing that separate development for different races was in accordance with divine will. The church’s endorsement gave apartheid a moral legitimacy in the eyes of many Afrikaners, who saw themselves fulfilling a divine mission through the upholding of racial segregation.

The Afrikaner establishment successfully developed a national mythology, creating heroic images of the past in which Afrikaners portrayed themselves as *Kultur-trägers*, bringing civilization to Africa (Freschi, Schmahmann, & Van Robbroeck, 2020). These messianic ideas also influenced South Africa’s foreign policy, as the white government positioned itself as a bastion of Western civilization in Africa. The regime sought alliances with anti-communist and conservative governments worldwide, supporting anti-communist movements in Africa and aligning itself with countries sharing similar ideological views.

However, the messianic aspirations of apartheid proved unsustainable. Global decolonization, mounting international opposition to apartheid, internal resistance from the black majority, and divisions within the ruling National Party increasingly undermined the regime’s ideological and political dominance. By the late 20th century, the messianic vision that once sustained Afrikaner nationalism began to unravel, creating a profound crisis within the Afrikaner community.

One can argue that the dismantling of apartheid began within the *Broederbond* itself, where the *verligte* (liberals) ultimately overcame so-called *verkrampste* (conservatives)<sup>3</sup>. This internal ideological shift paved the way for political reforms,

<sup>3</sup> The terms “*verligte*” and “*verkrampste*” originate from the Afrikaans language, meaning “enlightened” and “narrow-minded” (or “reactionary”) respectively. These terms emerged in South Africa during the mid-20th century and became widely used in the 1960s and 1970s to describe the ideological split within Afrikaner political thought. This division reflected broader debates within the Afrikaner community over the future of apartheid

culminating in the end of apartheid. While the liberal faction supported the integration of Afrikaners into a broader South African society, the conservative's faction remained committed to self-determination and isolationism, reflecting the broader tensions within Afrikaner nationalism as it confronted the collapse of its messianic vision.

## **The Transformation to Political Escapism**

### ***The Emergence of Independent Socio-Economic and Political Institutions***

As white minority rule faced mounting pressure from internal and external forces, segments of the Afrikaner community began to retreat into political escapism. This was driven by two primary factors: first, conservative Afrikaners had lost to the liberals within the National Party well before the fall of apartheid and were effectively excluded from the decision-making process. Moreover, as conservative circles resisted change, they were largely excluded from the negotiation process concerning South Africa's political transition. According to Leon Wessels, a former National Party politician and negotiator during the transition, these conservative factions refused to engage in discussions about the transfer of power (L. Wessels, personal communication, 2020).

Consequently, the conservative segment of the Afrikaner community found itself marginalized during the critical period of South Africa's transformation to democracy. Throughout the 1990s, their political influence diminished significantly, leaving many within this group disoriented by the rapid social and political changes. The shift to a democratic system disrupted the ideological foundations of Afrikaner nationalism, resulting in what scholars have termed "ethnic anxiety"—a profound sense of uncertainty and dislocation within the community (Schutte & Viljoen, 2021).

However, the situation began to shift in the late 1990s when Flip Buys, who has remained the leader ever since, took the helm of the Solidarity trade union. Under his leadership, a new course was set – one focused on consolidating the conservative Afrikaner population, especially the youth, and building independent socio-economic and political institutions. These structures were designed to preserve Afrikaner identity and autonomy in a rapidly changing South Africa. The creation of these institutions was not only a response to the political transition but also a manifestation of deep-seated fears and anxieties within the Afrikaner community regarding their future in a democratic society.

One of the most prominent examples of this trend was the establishment of **Orania**, a town founded in 1991 by Afrikaners seeking to create a self-sufficient and culturally exclusive community<sup>4</sup>. Orania was envisioned as a refuge for those Afrikaners unwilling or unable to reconcile themselves with the new political realities of South

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and the need for political reform in the face of growing domestic unrest and international opposition to South Africa's racial policies.

4 The first attempt to establish an Afrikaner settlement took place at Morgenzenon farm in the eastern Transvaal (now Mpumalanga), but it failed for various reasons. Subsequently, Orania, an abandoned town originally built for workers constructing a dam on the Orange River, was selected. Orania was chosen primarily because its isolation and low population density provided an opportunity to create an autonomous community (author's note)

Africa. The town operates on principles of self-reliance and voluntary segregation, aiming to preserve Afrikaner culture and language in a controlled environment.

Another significant pillar in these efforts to safeguard Afrikaner identity is the **Solidarity Movement (*Solidariteit*)**, which today encompasses not only the trade union but also several associated organizations. Each organization, while distinct in its focus, contributes to the overarching goal of maintaining Afrikaner cultural identity and autonomy:

- **Solidariteit** (the trade union) works to protect the economic interests of Afrikaner workers, particularly in sectors where they have traditionally held a strong presence.
- **AfriForum**, a civil rights organization, advocates for minority rights, with a specific emphasis on Afrikaner and other ethnic-racial issues. It engages in public advocacy and legal actions concerning property rights, cultural preservation, and community safety.
- **Helping Hand**, a social upliftment initiative, supports disadvantaged members of the Afrikaner community through poverty relief, education programs, and social development projects, including scholarships and mentoring.
- **Sol-Tech**, a vocational training college, equips young Afrikaners with practical skills in technical trades such as engineering, electronics, and mechanics, aligning with the needs of the South African job market.
- **Academia**, an Afrikaans-medium higher education institution, offers degree programs across various fields, with a strong focus on preserving cultural identity through language and tailored educational content.

While each of these organizations serves a unique purpose, they collectively aim to maintain Afrikaner identity and self-sufficiency amid South Africa's shifting political and social landscape.

### ***The Motivations Behind the Creation of Autonomous Institutions***

The motivations behind the creation of institutions like Orania and the Solidarity Movement are complex and multifaceted. At the heart of these efforts lies a profound sense of loss and dislocation within the Afrikaner community. The end of apartheid represented not just a political defeat but also a cultural and existential crisis for many Afrikaners, who had long viewed themselves as the natural rulers of South Africa.

The transition to a democratic South Africa, with its emphasis on majority rule and racial equality, was perceived by conservative Afrikaners as a threat to their way of life. As Carel Boshoff IV, the son of the founder of Orania noted in the interview: "My father always said there's three things that are going to happen. It's being driven out, being assimilated, and being annihilated. And between those three, we are just going to lose everything if we don't concentrate and make a place from where we could operate successfully" (C. Boscoff, personal communication, 2020). These fears became one of the main reasons for the internal inward migration to Orania.

Furthermore, many Afrikaners who initially welcomed the transition and supported the 1992 referendum to end apartheid later grew disillusioned with the direction of the country. According to several respondents, those who had supported the changes, including the abolition of apartheid, began to reassess their position.

They expressed disappointment in the ANC's reforms, stating that they realized the new government was not concerned with Afrikaner rights. Instead of fostering the "rainbow nation" promised by Nelson Mandela, Afrikaners found themselves increasingly alienated from the socio-political processes of the country. Many also lost their jobs due to affirmative action policies, which aimed to redress historical inequalities, further deepening their sense of exclusion.

Thus, two main factors drove the creation and growth of parallel institutions among Afrikaners. First, conservative Afrikaners sought to consolidate around those who felt left out of the new political system. Second, the ANC's policies focused on improving the welfare of the black majority, which gradually pushed Afrikaners out of their previous positions of influence. The government, especially in the early years, seemed to fear Afrikaner revanchism and intentionally distanced them from political decision-making.

For many Afrikaners, the creation of autonomous institutions was a way to resist what they saw as the erosion of their culture, identity, and loss of power. With their population representing just over 5% of South Africa's total, Afrikaners feared their political influence would be diminished in a system dominated by black African voters, who make up the vast majority of the population. These parallel institutions, such as the town of Orania and organizations like the Solidarity Movement, were seen crucial in preserving Afrikaner traditions and autonomy as they faced increasing marginalization in the new democratic order (Davies, 2007).

Economic factors also played a significant role in the emergence of institutions like Solidarity after apartheid. The dismantling of apartheid meant the loss of political and economic privileges that many Afrikaners had previously enjoyed. With the new government implementing policies such as affirmative action and Broad-Based Black Economic Empowerment (B-BBEE) aimed at redressing historical inequalities, many Afrikaners felt economically marginalized. For some, this led to a sense of economic insecurity, as opportunities in the job market became increasingly directed toward historically disadvantaged groups.

In response, organizations like Solidarity emerged to protect Afrikaner economic interests in this changing environment. Solidarity provided legal and labor-related support while also establishing educational institutions. These institutions aimed to help Afrikaners acquire new skills and remain competitive in the evolving job market. In this way, Solidarity became more than just a labor union; it became a central part of a broader movement for cultural and economic preservation.

Political and ideological motivations also played an important role. The end of apartheid brought about a major realignment in South African politics, with the ANC becoming the dominant political force. For many Afrikaners, who had long opposed the ANC and its policies, creating parallel institutions offered a way to retain a sense of political agency. These institutions provided a platform for Afrikaners to continue advocating for their interests and resisting the policies of the new government.

### ***The Challenges Faced by Isolationist Afrikaners***

The isolationist path chosen by some Afrikaners has not been without its challenges. The creation and maintenance of autonomous institutions like Orania, AfriForum, and Solidariteit have required significant resources, both in terms of finances

and human capital. These institutions operate in a context where they are often viewed with suspicion or outright hostility by the broader South African society, which often sees them as relics of a bygone era of racial segregation and privilege.

One of the key challenges faced by these institutions is their legal and political status within South Africa. While the South African constitution guarantees the right for self-determination, the existence of racially exclusive or culturally insular institutions is a contentious issue. Organizations like Orania or AfriForum have faced legal challenges and public criticism for their perceived efforts to undermine the principles of equality and non-discrimination that underpin the new South Africa (Zyl-Hermann, 2018)

Economic sustainability is another significant challenge for isolationist Afrikaners. The creation of self-sufficient communities like Orania requires significant investment in infrastructure, services, and economic activities. While the settlement has managed to attract a small but dedicated population, it remains a marginal player in the broader South African economy. The town's economic model, based on self-reliance and voluntary segregation, limits its ability to engage with the larger economy, making it vulnerable to economic downturns and other external pressures.

The insularity of these institutions also poses challenges in terms of their long-term viability. By isolating themselves from the broader South African society, these institutions risk becoming increasingly out of touch with the realities of the country. This insularity may lead to a narrowing of perspectives and a lack of influence over the broader South Africa.

However, it would be unfair to claim that such efforts are not being made. For example, the Solidarity Movement, both within its trade union framework and through its civil rights organization, AfriForum, has been working to build bridges with ethnic minorities within South Africa. This includes reaching out to the Coloured community, which also experiences a sense of alienation and neglect from the ruling majority.

### ***The Outcomes of the Isolationist Project***

The outcomes of the isolationist project within the Afrikaner community have been mixed. The institutions like Orania, AfriForum, and Solidarity have succeeded in preserving certain aspects of Afrikaner culture and identity. They have provided a space for Afrikaners who feel alienated from the broader South African society to maintain their traditions and values. These institutions have also played a role in advocating for the rights and interests of Afrikaners and other minority groups, often through legal action and public campaigns. Moreover, relying solely on private funding from individuals and businesses, Orania has become the fastest-growing, if not the only, rural settlement in South Africa, although its population consist of 2874 people<sup>5</sup>

However, the isolationist project has also had significant limitations. While these institutions have managed to attract a dedicated following, they remain marginal players in the broader South African political and social landscape. Their impact is largely symbolic, representing a retreat from broader engagement with the challenges and opportunities of the new South Africa. The insularity and exclusivity of these institutions have also limited their ability to influence the broader course of South African politics

5 Orania Census <https://myorania.co.za/Orania-Dorpsraad-Sensus-2024.pdf>

and society. For example, in South Africa, there is only one pro-Afrikaner party, the Freedom Front Plus (FF+), which garners a very small percentage of the vote—1.36% in the 2024 elections. Over the years, the party has continuously and unsuccessfully lobbied for the adoption of national legislation for self-determination, specifically aimed at Afrikaners, under Section 235 of the Constitution (P. Groenewald, Personal communication, 2020). This section allows for the right to self-determination within the framework of South African law, but no significant progress has been made in translating this into meaningful political or territorial autonomy for Afrikaners.

The isolationist project has also faced criticism from within the Afrikaner community. Some Afrikaners argue that the focus on self-reliance and voluntary segregation is a misguided response to the challenges of the post-apartheid era. They argue that Afrikaners should instead focus on finding ways to engage with the broader South African society, contributing to the country's development and building alliances with other communities. This internal debate reflects the broader tensions within the Afrikaner community about the best way to navigate the challenges of the post-apartheid era.

## **Conclusion**

The “Afrikaner Question” remains a significant issue in contemporary South African politics. The end of apartheid marked the beginning of a new era but left unresolved many deep-seated issues related to identity, nationalism, and the legacy of apartheid. South Africa's transition to democracy, often seen as a model for others, has highlighted the complexities of nation-building, including economic inequality, social division, and political instability. The Afrikaner community's experience of loss and dislocation in the post-apartheid era underscores the difficulty of balancing the needs of different communities within a single nation-state.

The debates within the Afrikaner community about integration and isolation also resonate globally, touching on broader issues of identity, nationalism, and multiculturalism. As nations worldwide grapple with immigration, cultural diversity, and national identity, the Afrikaner experience offers lessons about the possibilities and limits of integration in a rapidly changing world.

One crucial lesson from Afrikaner history is the importance of engagement, even with ideological enemies. The refusal of conservative Afrikaner leaders to participate in negotiations with the ANC during South Africa's democratic transition meant their views were sidelined, leaving them without significant influence over the outcomes. This demonstrates that withdrawal from dialogue not only undermines a community's position but also risks further marginalization.

The shift from Afrikaner messianism to political escapism illustrates the challenges of adapting to evolving political landscapes. Once rooted in a belief in their unique historical mission, Afrikaner nationalism faced a profound crisis as these aspirations proved unsustainable in the late 20th century. The fear of assimilation and the persistent drive for self-preservation, central themes throughout Afrikaner history, prompted a move toward sustainability and self-reliance in more limited spheres.

Throughout their history, the Afrikaner community's primary focus has been the preservation of identity, with both political messianism and escapism serving as tools to achieve this goal. The shift to political escapism, marked by the creation of Afrikaner institutions and self-isolation, reflects both the community's adaptation

to the new democratic order and its inherent limitations. While these institutions have safeguarded Afrikaner culture and identity, they have also curtailed broader engagement with South African society, fostering marginalization and irrelevance. These tensions highlight the broader challenges of building a united and inclusive society in a diverse, multicultural context.

The Afrikaner community's experiences highlight the importance of flexibility in responding to changing realities. A focus on preserving identity and autonomy has often led to resistance to change, narrowing perspectives and raising questions about the long-term viability of isolationism. This approach has limited opportunities for constructive engagement with South Africa's broader challenges and opportunities.

The future of Afrikaner politics depends on finding a balance between cultural preservation and meaningful participation in the political system. Isolationism, while protecting certain cultural elements, restricts societal influence and risks further marginalization. For Afrikaners to contribute to South Africa's development and secure their cultural heritage, they must seek ways to engage with broader society, building alliances and fostering inclusivity.

In conclusion, the critical lesson from Afrikaner history extends beyond their specific experience and serves as a cautionary tale for those who seek to aggrandize themselves at the expense of neighboring communities through segregation and violence, whether in South Africa's past or in contexts like Palestine today. Such approaches are inherently unsustainable. Efforts to dominate or exclude others inevitably result in long-term instability and conflict, as evidenced by the eventual collapse of apartheid.

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## The Postcolonial Project of “Zambia as a Christian Nation”: Success or Failure?

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**Abstract:** *Since gaining independence in 1964, Zambia, just like other African countries, has been looking for its own future path of development, which requires independent development of its own national projects, as well as their implementation. The article examines the “Zambia as a Christian Nation” project, and also attempts to answer the question of why this project turned out to be so attractive to Zambians and remains popular to this day, even after leaving the presidency in 2002, and in 2011 and from the life of the author of this project, F. Chiluba, and whether the idea of a “Christian nation” can play a unifying role in other countries. To analyze the reasons for the longevity of the “Christian nation” project, this project is compared with other less successful one, also born and developed in Zambian society - the project of Zambian humanism introduced by Keneth Kaunda, the first president of independent Zambia. Whereas both projects emphasized improving the standard of living of the population the project of Zambian humanism (atheistic project) was quickly forgotten by the population, the idea of a Christian nation (religious project) in its broad interpretation continues to live in the minds and hearts of Zambians even after the author of this project, F.Chilumba, left the presidential post. Thus, although the project of a Christian nation was not successfully implemented, the idea of Zambia as a Christian nation remains popular till present.*

**Keywords:** *Zambia as a Christian nation, Zambian humanism*

### Introduction

After gaining political independence, African countries were on the way to shape national ideology to become sovereign not only politically, but also ideologically and mentally. Since gaining independence in 1964, Zambia, just like other African countries, has been looking for its own future path of development, which required the independent development of national projects, as well as their implementation.

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One of the paths considered is the post-colonial national project “Zambia as a Christian nation” announced by F. Chiluba (President of Zambia 1991–2002) in 1991. Five years later, F. Chiluba adjusted the constitution which said “We, the people of Zambia, exercise our constitutional authority; acknowledge the supremacy of Almighty God; We declare the Republic a Christian nation, while supporting the right of every person to enjoy freedom of conscience and religion.” (The Constitution of Zambia, 1996).

The article attempts to answer the question of why, despite its dubious success, the idea of Christian nation turned out to be so attractive to Zambians and remains popular to this day. The project of “Christian nation” is compared against a less successful project of “Zambian Humanism”. Whereas the atheistic project of “Zambian humanism” was quickly forgotten by the population, the idea of a “Christian nation” in its broad interpretation continues to live in the minds and hearts of Zambians even after the author of the idea, F. Chiluba, left the presidential post. Thus, although the project of a Christian nation itself was not successfully implemented during the presidency of F. Chiluba, the idea of Zambia as a Christian nation remains popular to this day due to the fact that it reinforces earthly ideals (fundamental human rights, equality, a decent standard of living) with a strong spiritual component. Since religious actors play an important role in the social and public life in many African states (Zakharov, Ulanova, 2022), the discourse of where Christianity may glue the nation together may be further extrapolated to other countries.

### **“Zambian Humanism” as a Predecessor to the “Zambia - Christian Nation” Project**

The first post-colonial civilizational project introduced in independent Zambia was the secular project of “Zambian humanism”, formulated by the President of independent Zambia K. Kaunda (*Kenneth Kaunda*) (1964–1991). In search of a new post-colonial path for Zambia, Kaunda proclaimed the ideas of “Zambian humanism” in 1967, which were adopted by the ruling party UNIP as the official national ideology of Zambia (Van Klinken, 2017, P. 136).

“Zabian Humanism” represented a form of African socialism that combined traditional African values with Western socialist ones. The ideas initially expressed in the speeches were further developed in such works as a series of letters published in the magazine “Humanist in Zambia” (1966), and in the brochure “Humanism in Zambia and a guide to its implementation” (Van Klinken, 2017, P. 137) In 2007, in the work “Zambian Humanism. 40 years later” K. Kaunda retrospectively highlighted the basic principles of “Zambian humanism” such as collective values, equality and respect for human rights, as well as on the balance between collectivism and respect for the rights of each individual (Plant, 2022, P. 377).

The secular nature of the concept caused discontent among churches and their reluctance to participate in assisting the government in implementing the programs. Churches continued to participate in social projects initiated by the government, but already in 1976 they refused to support educational reform, considering it atheistic (Prokopenko, 2021, P. 41).

## **Implementation of the Project “Zambian Humanism”**

Some scholars are skeptical about the impact that “Zambian humanism” had on society. Klinken argued that “Zambian humanism” “had nothing in common with ‘humanism’ or socialism, except when the leadership presented them rhetorically” (Van Klinken, 2017, P. 136) and rather represented a mixture of “Fabian socialism, nineteenth-century liberalism, Christian morality and an idealization of the social values of Zambia’s pre-capitalist past” (Van Klinken, 2017, P. 137). In practice, the ideas of “Zambian humanism” turned into the construction of a socialist command-administrative economy. The largest enterprises were nationalized, including the mining industry (recall that the “copper belt” passes through Zambia) and the banking sector, with the further goal of dividing profits among all citizens of the country. Strict control was exercised over the remaining private businesses in the country.

The Zambian humanist project came under threat in the 1980s amid economic problems due to falling prices for copper, Zambia’s main source of export earnings (Van Klinken, 2017, P. 137). Due to the deteriorating economic situation and the need to negotiate with international creditors (IMF), Kaunda signed a new constitution in 1990, and in the 1991 elections, the ruling UNIP lost elections to the Movement for Multiparty Democracy (MMD). This is how MMD’s leader Frederick J. Chiluba became the second President of Zambia (Van Klinken, 2017, P. 140). K. Kaunda’s departure from the presidency put an end to the project of “Zambian humanism” which fell into oblivion due to a change in political and economic course.

As put by Anthony Kanu, Nigerian philosopher, the “Zambian humanism” failed as a project because it failed to genuinely connect the history and culture of the Zambians (Plant, 2012, P. 377). Assumably, it was the absence of a religious component that was the reason for its failure. Interestingly, later on Kaunda proposed a rebranding of “Zambian humanism”, trying to demonstrate that this project was not secular, but religious in nature. He tried to prove that Christian ideas lay at the very basis of the philosophy of humanism.

## **Project “Zambia – Christian Nation”**

With the departure of Kaunda and the arrival of Frederick Chiluba, the project of Zambian humanism gave way to the project of a “Christian nation”. In his Christmas address to the nation in 1991, Chiluba proposed that Zambia be declared a “Christian nation” (Cheyeka, 2002, P. 171). In his inaugural speech, F. Chiluba turned to God with gratitude (Chiluba Inauguration speech, 1991), and later Chiluba spoke at many public events holding a Bible. Five years later, Frederick Chiluba introduced the concept of a Christian nation into the preamble of the constitution.

For a deeper understanding of why the Christian nation project helped F. Chiluba in the political struggle, it is necessary to understand what the concept of Zambia as a Christian state stood for. But this is where researchers run into difficulties. When analyzing official speeches, program documents and the works of researchers, we see that the concept of a “Christian state” is quite vague and is not disclosed in detail. Moreover, an exact definition has not yet been given and one can only trace the evolution of the concept, its appearance, clarification and meaning for ordinary Zambians.

The basic idea of what F. Chiluba himself put into the concept of “Zambia is a Christian state” can be obtained from his inaugural speech in 1991, as well as from the Constitution as amended in 1996. Taking the oath in 1991, F. Chiluba repeatedly mentioned God in his speech and asked him to help overcome corruption, injustice and achieve justice and stability. Due to the fact that it is in this speech that the main postulates of the “Christian nation” project are set out, we present excerpts from it below: *“Dear God, as a nation, we now come to your throne of Grace, and admit our guilt. We repent from all our wicked ways of idolatry, witchcraft, occult, immorality, injustice, and corruption, and all other scenes that violated your righteous laws. We turn away from all this and renounce it all in Jesus name. Amen. We ask for your forgiveness, dear Father, and cleansing through the blood of Jesus. Therefore, we thank you for healing our land. We pray that You would bring healing, restoration, revival, blessing and prosperity to Zambia and in the name of Jesus, Amen..... I further declare that Zambia is a Christian country that will seek to be governed by the righteous principles of the Word of God. Righteousness and justice must prevail at all levels of government and then we will see the righteousness of God exalting Zambia...”* (Chiluba Inauguration speech, 1991).

The 1991 inaugural speech of F. Chiluba is permeated with religious rhetoric, and references to the Bible are given as an argument. At the same time, referring to the Holy Scriptures, F. Chiluba spoke not so much about spiritual benefits and purity of the soul, but about the rule of law, the absence of corruption and bribery. Corruption is placed on a par with the occult and witchcraft. In other words, the president turned to God with a request to help solve absolutely earthly problems associated with the ineffectiveness of the public administration system.

At the same time, neither in this speech nor in subsequent ones was there a promise to introduce specific laws relating to the status of the church. For this reason sociologist P. Freston described Zambia's declaration as “politically empty” (Freston, 2001, P. 160).

The intentions voiced by F. Chilumba in 1991 were recorded 5 years later. The constitution (1991), as amended by F. Chiluba in 1996, contains a reference to the fact that Zambia is proclaimed a “Christian state” (*...DECLARE the Republic a Christian nation while upholding the right of every person to enjoy that person's freedom of conscience or religion*) (The Constitution of Zambia, 1996). Along with this principle, the constitution proclaims the equality of men and women, fundamental human rights, as well as the principles of democratic governance. In other words, the concept of a Christian nation is placed on a par with other values and human rights.

Not all the proclaimed ideals of the “Christian state” were put into practice.

The reader can rightly note, all these ideas are more likely to correlate with ideas of social well-being and justice rather than with religion and spirituality. Nevertheless, the socio-economic component occupies a large place in the concept of a “Christian nation”. That is why one of the criteria for the success of the project is an increase in living standards, and it is the criterion yet to be met. In this regard, the ideas of the Christian nation were not fully put into practice.

Moreover, researchers (Cheyeka, 2022; Gifford, 2008; Freston, 2001; Phiri, 2003; Prokopenko, 2021) criticized Chiluba for lack of concrete actions to implement the project of Christian nation. Moreover, they all note that Chiluba favored not all the Christian denominations, but prioritized Pentecostals.

In 2001, after a two-year term as president, F. Chiluba tried to amend the constitution in order to be able to be elected for a third term, but failed. In 2002, charges of corruption were brought against the now former president F. Chiluba, and in 2003 he was arrested. After 6 years of legal proceedings, all charges against him were dropped, but his health was undermined, and he died in 2011.

Although F. Chiluba himself lost power, until 2011 representatives of his party were in power; during this period, religious rhetoric was not used as actively as before, and the development of “Christian nation” project was put on pause.

### **A New Stage of the “Christian Nation” Project: The 2016 Constitution and MNGRA**

It would be logical to assume that with the departure of F. Chiluba from politics, and then from life, his project “Zambia as a Christian nation” was also consigned to oblivion. However, this did not happen. After F. Chiluba, no one was able to formulate an idea that would find as strong a response in the hearts of citizens as the idea of Christian nation.

After a fairly significant break, religious discourse returned to political life with the coming to power of Edgar Lungu from the Patriotic Front party in 2015. Having come to power, E. Lungu began to refine the concept of Zambia as a Christian nation. The 2016 constitution contains the postulate of a Christian nation at the very beginning. Constitution as amended 2016 (Constitution of Zambia Amendment № 2, 2016) begins with religious rhetoric, where faith in God is placed on the same line as human rights: “*WE, THE PEOPLE OF ZAMBIA: ACKNOWLEDGE the supremacy of God Almighty; DECLARE the Republic a Christian Nation while upholding a person’s right to freedom of conscience, belief or religion; UPHOLD the human rights and fundamental freedoms of every person;* (Constitution of Zambia Amendment № 2, 2016).

Unlike F. Chiluba, E. Lungu did not limit himself to amendments to the Constitution and in 2016 created a Ministry of National Guidance and Religious Affairs (MNGRA), which was subsequently disbanded in 2021, and its functions were transferred directly to the presidential administration. Since 2016, MNGRA had been working on developing the organizational structure, strategy, and charter, which resulted in the MNGRA Action Plan (Cheyeka 2022, P. 26) dated June 20, 2020. According to the Plan, the functions entrusted to the MNGRA - promotion of Christian values, interfaith dialogue, national leadership, national values, principles and ethics, public religious celebrations, conservation of Christian and religious sites and religious affairs. This demonstrates how E. Lungu was able to integrate the legacy of K. Kaunda (“Zambian humanism”), F. Chiluba (introduction of the concept of “Christian nation”), as well as his own vision of the “Christian nation” (Mwale et al, 2020, P. 33).

The creation of MNGRA set off a new round of discussions on what is meant by the concept of “Zambia is a Christian nation”. In one of his recent articles, Austin Cheyeka (Cheyeka, 2022, P. 26) contemplated on the meaning of Christian nation and concluded that even by 2022, the most complete, accurate and detailed definition of “Zambia as a Christian Nation” is yet to be given (Cheyeka, 2022, P. 26). Austin Cheyeka bases his conclusions on insider information from a former MNGRA’s

employee who acknowledged that in an email dated June 24, 2022 the work on defining the concept of a “Christian nation” is still ongoing. This employee confessed as well that defining a “Christian nation” is not an easy job as it is unclear how this should be done since Zambia is constitutionally a multi-religious country that respects freedom of conscience. In other words, the concept of a Christian nation has yet to be clarified, and the action plan for its implementation needs to be supplemented with specific measures.

Thus, we see that despite all the statements under E. Lunga, the creation of a separate ministry for religious affairs MNGRA, as well as the publication of the 2020 Action Plan, a clear detailed definition of Zambia as a Christian nation was never given. Meanwhile, the analysis of documents and official speeches reveal that Christianity is understood there as social justice and the rule of law, with no emphasis put on spirituality.

### **The Importance of the Idea of a Christian Nation for the Zambians**

To understand the potential of the “Christian nation” project, it is necessary not only to trace the evolution of religious rhetoric in the political discourse, but also get familiarized with the interpretation of common Zambians.

In this regard, the essay pays tribute to the British researcher Naomi Haynes who conducted a 22-month long field research in Zambia, primarily in Nsofu (a suburb of Kitwe, Zambia's second largest city). This city of 25,000 has several dozen Pentecostal churches, most of which were founded after 2000 (Haynes, 2015, P. 5–24).

According to N. Haynes, parishioners of Pentecostal churches in Nsofu still attach great importance to the preamble of the constitution. Since this preamble declared Zambia a Christian nation, they often call it “Declaration”. Many respondents noted that it is important to them that Zambia is officially a Christian country, and that Zambia remains Christian (Haynes, 2015, P.13). Many of those surveyed expressed concern that the “Christian” language in the constitution could be replaced with “more secular” ones (Haynes, 2015, P.13).

But what meaning does the thesis about Zambia as a Christian nation carry for parishioners? When asked what it means for Zambia to be a Christian country, believers are likely to point to the almost continuous peace that has reigned in the country since independence in 1964. Respondents noted that for them this means peace in their country and the absence of civil strife, violence, dictatorial political regimes. They believed that such peaceful coexistence was ensured by the fact that Zambia was a Christian nation. This tranquil existence in Zambia is especially noticeable against the backdrop of events in other countries in the region that have experienced civil war, dictatorship and political violence. The country's comparative stability has certainly not gone unnoticed by its citizens, perhaps especially since Zambia has been hosting refugees from countries as far away as Rwanda and Burundi (Haynes, 2015, P.13). So, the respondents believe that peace in their country is not an accidental result of history, and certainly not the result of politics. Most likely, Zambia is free from wars and serious violence because it has been declared a Christian country.

As we see, the concept of a “Christian nation” has become firmly established into the daily lives of ordinary Zambians and became part of their national identity as a common element that unites the nation and protects it from adversity.

One more perspective of “Chrisian nation” comes from one more article of Austin Cheyeka where he cites his interviews with church representatives (Cheyeka et al, 2014). In one of these interviews (as of 12/14/2010, Lusaka), David Musaka, head of the large evangelical (and charismatic) church Independent Churches of Zambia (ICOZ) said that *“As ICOZ, we contribute to shaping the spiritual, social and political development of Zambia. We act as advisors, but... we do not fight... with the authorities, because this could lead to civil unrest or anarchy”* (Cheyeka et al, 2014). Thus, the function of the church in this regard is to bring spirituality and earthly agenda together, an aspect which was ignored by many. Pentecostal churches do not seek to interfere in politics or influence political course, but at the same time they do not consider themselves to be completely apolitical. This can be explained by the fact that worldly and spiritual life for them are intertwined and inseparable. It follows that the earthly problems with which Zambians turn to church are for them a continuous continuation of the spiritual dimension (Cheyeka et al, 2014).

Overall, whereas in official government documents the concept of a “Christian nation” implies a society without corruption and with respect for human rights, then among ordinary Zambians, a “Christian nation” is associated with peace and the absence of violence. It is noteworthy that despite the fact that at different levels the idea of a “Christian nation” is interpreted differently and that everyone puts something of their own into it, it resonates in everyone’s heart as a kind of guiding star, giving hope for a brighter future.

At the same time too much expectations are pinned on the concept of Christian nature, and these expectations are rather material than spiritual in nature. This all leads to frustration since in spite of the Declaration of Christian nation, many Zambians still live in poverty, still facing injustice and corruption. In this regard, the project of “Christian nation” can be called a failure.

At the same time, despite the failure to implement the “Christian nation” project, researchers are interested in the strength of the idea itself and its possible integrating potential, which can be applied in other countries of the African continent.

No matter how abstract and elusive the idea of a “Christian nation” may be, it also finds support among Africans in other countries. Thus, according to a Pew survey on whether their country should be a Christian nation or the church should be separated, in a number of African countries, including Nigeria and South Africa, respondents were in favor of their country being officially considered a Christian nation (Freston, 2008, P. 42). The idea of a single religion can help avoid “the emergence of open bloody conflicts that threaten internal security and stability” (Proko-penko, 2021, P. 40).

Unfortunately, the claim that the promotion of the “Christian nation” project can be effectively used in other African countries, even with a predominantly Christian population, seems dubious. even if we take into account the belief of some Zambians that it was the fact that “Zambia is a Christian nation” that saved the country from many troubles. While understanding that in the eyes of some Zambians, the fact that Zambia is a Christian nation has saved the country from many troubles, it must be understood that not all countries, even those with a predominantly Christian population, can learn from Zambia's experience. A notable unfortunate example is Rwanda, where the church was involved in justifying the 1994 genocide against the Tutsi and even in carrying out the genocide itself, as detailed in Krivushin (Kri-



vushin, 2022). Krivushin talks about eyewitness accounts that some priests led the process of extermination of Tutsis. In particular, I. Krivushin cites the following words of a witness who survived the genocide: "I saw Father Thadde Rusingizandekwe... leading the attack on the church. He stood at the Holy Gate, the main entrance to the church... He had a pistol with a chain slung across his back in front. He was accompanied by a soldier from Kibeho named Anastas Hakizimana. Both of them shot directly at the refugees in the church.." (Krivushin, 2022, P. 128). This example clearly shows that the religiosity of the population and the spread of churches are not capable of bringing either prosperity or peace to the country.

### **Instead of Conclusion**

The idea of Zambia as a Christian nation remains abstract and is interpreted differently by politicians and ordinary citizens. At the same time, it is important to distinguish between the significance of the idea/attractor of the "Christian nation" that symbolizes the project, and the success of the project itself. In this case, the implementation of the "Zambia as a Christian Nation" project has been repeatedly criticized by experts both inside and outside the country. But the very idea of "Zambia as a Christian nation" is popular among many Zambians and is seen as a kind of long-term guideline that unites the nation.

A comparison of the projects of "Zambian humanism" and the "Christian nation" reveals many similarities between them. Both projects emphasize the importance of fundamental human rights and freedoms, and both are aimed at preserving traditional values. The main difference between the projects is that "Zambian humanism" is more secular in nature, while the "Zambia - a Christian Nation" project is based on faith in Almighty God (Preamble of the Constitution as amended in 2016). It can be assumed that it is the religious component that is the key to the success of this concept, which allowed the idea to outlive its author (F. Chiluba), receive a new reading after 2016 and remain popular to this day.

The thesis "Zambia is a Christian nation" resonates in the hearts of many Zambians also due to its uncertainty and vagueness. It is a mixture of ideas about religiosity, African traditional values, morality and a decent way of life, i.e. economic component. At the same time, as field research shows, for ordinary Zambians it is not so much the theological details of the concept of Zambia as a Christian state that are important, but simply the awareness that the basis of the state system is faith in God, even if many interpret this differently.

Although the successful implementation of the "Christian nation" project as a tool for resolving conflicts and providing a basis for socio-economic growth is impossible everywhere, the attempt to implement this project in Zambia illustrates how even an abstract, half-formed and half-articulated idea can inspire and evolve independently (without reference to its author), if it "touches a nerve" and reminds of something important, albeit not to everyone, but to a larger population. In the case of the idea of a "Christian nation", this important thing is the spiritual component, uniting the divine and worldly ideas of well-being, filling everyday life with divine content and pointing out the path of righteous living as the path to well-being. Discussions about what a Christian nation is, whether Zambia is a Christian nation and what needs to be done to bring Zambia closer to the ideal of a Christian nation are widely present in the country's information field at the present time, that is, more

than 30 years after F. Chiluba proposed this idea. Thus, this concept, although not clearly formulated and not fully realized, although interpreted differently by many, became an integral part of the Zambian national identity.

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# SOCIETY, ECONOMICS AND ECOLOGY



## Discounting Cash Flows as a Method of Estimating the Value of a Company

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**Abstract:** *Estimating the value of a company is a necessary procedure if it is any type of investment, or if any significant decision for the company follows (merging with another company, investing, selling business, etc.). The essence of discounting cash flows is in their value, which is expected to be realized at some time in the future. The discounted cash flows method requires a quality projection of BH Telecom's income, investments based on financial business statements and available information on the market (stock exchange) to create the basis for designing free cash flows. In the method of discounting cash flows (DNT), more precisely the free cash flow to capital (FCFE) used in the paper, the key parameters are stable growth, income, profit before tax, profit margin, reinvestment and discount rate. Telecommunications is a specific sector of the industry and requires constant investments to bring services and services closer to customers. The appraisal of BH Telecom's value was made based on the company's financial statements. In the valuation process, a projection of free cash flows was made and the terminal, final and capital value was determined as a comparative value with the real market value of the company's shares.*

**Keywords:** *discounting cash flows, free cash flow, profit margin, reinvestment, discount rate, terminal value.*

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## **Introduction**

Valuing or appraising the value of a company is a very important procedure, if we look at for any reason why the company's assessment itself is done. It can be for the purpose of assessing its market value to be able to evaluate the performance of the business or the payment of dividends to the owners, the sale of the business, for the purposes of some court decisions, etc. The importance of understanding the concept of values and methods is an essential pre-requisite to assess this value at all, and later it is perhaps even more important in making decisions that can affect the company's business itself and thus its future. Discounting free cash flow is one of the methods used in estimating the value of a joint stock company, of course there are other methods. Knowing how much an asset is worth and what determines the value is a pre-requisite for intelligent decision-making, in choosing future investments, in deciding on the appropriate price to pay or profit when taking over, about financing or paying dividends when running a business itself. (Damodaran, 2012).

In this paper, the method of discounted free cash flows was used as a method of estimating the value of BH Telecom. In the DNT value method, the value of the company's assets is the present value of the expected cash flows in relation to the funds available to the company, discounted backwards at a rate that reflects the riskiness of cash flows. The company represents the leading telecommunications company in the Federation of BiH, together with Telekom RS, it represents one of the leaders in the field of telecommunications in BiH. According to the report of RAC (Communications Regulatory Agency of BiH), BH Telecom, according to the realized total revenue for 2022, occupies 50.05% of the total realized revenue in telecommunications activity, in second place is Telekom RS with 31.68%, in third place is HT, followed by other alternative operators. Which means that it represents a serious partner in the field of telecommunications industry, operating in the local, regional and international telecommunications space. Although the telecommunications industry in Bosnia and Herzegovina is in the development phase, regardless of this fact, the telecommunications market and the application of digital technology shows a tendency to grow starting with the use of digital services in everyday life, the digitalization of business from the perspective of business, which leaves room for development and investment in this activity.

The aim of this paper is to determine the value of BH Telecom by the method of discounting cash flows, then to determine which of the methods most suitable for application, which advantages are the most appropriate chosen method and what are its disadvantages. On the example of a company (BH Telecom), the method of discounting cash flows was applied and obtained value was compared with the market values of companies of similar or the same activities listed on the Sarajevo Stock Exchange (SASE) and Banja Luka Stock Exchange (BLSE). The paper uses data that are publicly published and available, such as financial statements of BH Telecom, reports of the Regulatory Agency of Bosnia and Herzegovina, macroeconomic projections of the Central Bank of BiH and other published data, scientific and professional papers, etc.

Through the example of companies listed on the BH Telecom stock exchange, the method of discounting free cash flows will be shown. First, it is necessary to project cash flows based on the calculated stable growth rate, operating margins and calculate the profit of the company EBIT, then make a projection of the company's

reinvestment rate for the planned period to reach net profit after tax and access cash flow discounting using a discount rate. As a result, it is necessary to determine the residual value and price of capital. It is also necessary to look at the model and its disadvantages or advantages, which were reached in the process of valuing the company concerned, as well as the comparison with the current market value.

### **Analysis of Financial Statements**

When it comes to the situation and changes in the company's assets, capital and liabilities, it should be emphasized that the total assets as of December 31, 2021, amounted 1,209.5 million BAM compared to 2020 when the assets amounted to 1,231.7 million BAM, which represents a decrease of 22.2 million BAM. If we compare 2019 compared to 2021, the increase in total assets amounts to 30,517 BAM in favor of 2021.

**Tabel 1. Balance sheet (in 000 KM)**

<b>Year</b>	<b>31.12.2019.</b>	<b>31.12.2020.</b>	<b>31.12.2021.</b>
<b>ASSETS</b>	<b>1.178.989</b>	<b>1.231.680</b>	<b>1.209.506</b>
Item of the financial report			
Property, plant and Equipment	724.372	683.141	666.718
Other fixed assets	118	122	126
Non-current assets and long-term Placements	<b>809.347</b>	<b>810.596</b>	<b>824.517</b>
Intangible assets	63.176	61.576	63.273
Inventory	21.188	22.560	22.053
Long-term financial placements	-	55.363	84.088
Other long-term claims	-	10.179	10.161
Accured receivables	493	215	49
Defferd tax funds	5.491	5.768	5.677
Floating capital	364.151	415.316	379.312
Short-term financial placements	192.313	253.522	196.772
Short-term receivables	17.145	102.232	105.973
Account receivable	55.727	55.277	60.321
Money and cash equivalent.	20.084	37.002	54.694
<b>LIABILITIES</b>	<b>1.178 989</b>	<b>1.231 680</b>	<b>1.209.506</b>
Capital	1.011.172	1.015 729	994.558
Long – term reservation	25.443	24.741	24.039
Long - term liabilities	117.442	80.762	71.328
Deferred Tax Liabilities	-	460	1.101
Short-term liabilities	24.932	68.788	75.840
Passive accruals	.	41.200	42.640

<b>Year</b>	<b>2019.</b>	<b>2020.</b>	<b>2021.</b>
Subscribed capital	634.574	634.574	634.574
Legal reserves	310.324	310.324	306.646
Fair value reserves	(2.245)	(8.165)	(6.525)
Accumulated profit	68.519	78.996	59.863



Profit of the current year	40.537	63.826	64.826
<b>EQUITY</b>	<b>1.1011.172</b>	<b>1.015.729</b>	<b>994.558</b>
ROE (Return on equity)	5.04%	4.64%	6.37%
ROA (Return on assets)	4.32%	3.83%	5.23%

Source: According to the audit report of Telecom BH, author's processing.

According to the audit report (Sarajevo Stock Exchange SASE, 2023), the data presented in the previous table tell us that there have been changes in capital, legal reserves reported in the amount of 306,646 thousand BAM (2020: 310,324 thousand BAM) were formed in previous years from the results of operations. Fair value reserves in the amount of BAM 6,525 thousand (2019: BAM 2,245 and 2020: KM 8,165 thousand) refer to the stock of unrealised losses following the change in the fair value of the shares of Eutelsat Communications Paris, France, owned by Telecom BH in 2021. Accumulated profit in the amount of 59,863 KM (2019: 68,519 KM and 2020: 78,996 thousand KM) was formed from the results so far and current profit, which amounts to 63,317 thousand KM. The owner is in 2021. made a decision on the allocation of the remainder of the retained earnings from 2020. in the amount of BAM 35,000 thousand in the name of dividend and the decision on the payment of additional dividend from undistributed profit for 2018, 2019 and 2020. and the reserve fund in the amount of BAM 49,998 thousand, which was paid at the end of 2021 in the total amount of BAM 84,717 thousand (2020: BAM 36,000 thousand).

Current or working capital in the total percentage of funds for 2020 amounted to 89.9% of total operating revenues, and in 2021 this percentage decreased to 84.7% of the share of working capital in operating income. A higher percentage of working or current assets allows the company to reduce market pressure because it can only finance the growth of its business, i.e. it shows its financial stability and liquidity. Stock tying days for 2019 and 2020 there has been a write-off of obsolete stocks and equipment, so we cannot establish stock tying days. For 2021, the days of tying up stocks are 172.16, which means that it takes 172.16 days for the stock to be sold, i.e. to cash in. Compared to the previous period (2019, 2020) when inventories were written off due to the obsolescence of inventories. Customer receivables have the following structure for 2020 and 2021 where the highest percentage of customers are days of collection of receivables from customers are 90 days where 56% of customers belong and then 30 days 39% of customers pay for services for one month, then 4% are customers who settle their obligations for services of 31-60 days and 1% for customers who belong to the last group of 61-90 days to pay for services provided. Other receivables related to receivables from the provision of services abroad, and relate to operators in international traffic, because the measurements of telecommunications traffic were not harmonized.

Most of the company's liabilities relate to leases of buildings, land and equipment. Furthermore, liabilities to suppliers, i.e. days of settlement of liabilities to suppliers, can be divided into two segments, liabilities to suppliers in the country and liabilities to suppliers abroad. In 2020, the accounts payable to suppliers in the country was settled in 34 days, and the days of payment of liabilities to suppliers in 2021 amounted to 30.8 days in the settlement of the company's liabilities to suppliers in the country. The settlement of liabilities to suppliers abroad for 2020 took 69.8 days, and in 2021 it took 72.7 days to settle liabilities to suppliers. According to the

financial statements, the company has no credit debts, which shows that the price (cost) of the company's capital is equal to the price or cost of equity.

In the process of assessing the value of the company using the yield method after servicing debts, i.e. paying taxes, it is necessary to primarily perform an analysis of the company's financial statements.

**Table 2.** Profit & loss statement (in 000 BAM)

<b>Year</b>	<b>31.12.2019.</b>	<b>31.12.2020.</b>	<b>31.12.2021.</b>
Revenue (from the sale of services)	458.947	436.370	451.531
Other Income	14.841	15.410	14.553
<b>OPERATING INCOME</b>	<b>473.788</b>	<b>451.780</b>	<b>466.084</b>
Changes in inventory and production in progress	(285)	577	(614)
Capitalized own labor	7.039	6.263	6.631
Payroll expenses	(123.305)	(121.596)	(120.709)
Depreciation expense	(111.287)	(95.239)	(92.272)
Other operating costs	(141.851)	(135.216)	(137.653)
<b>TOTAL OPERATING INCOME</b>	<b>(418.435)</b>	<b>(396.295)</b>	<b>(392.536)</b>
<b>Result of the activity</b>	<b>55.353</b>	<b>55.485</b>	<b>73.548</b>
The effects of the implementation of IFRS 15		(3.938)	(4.113)
<b>The result of operational activities</b>	<b>55.353</b>	<b>51.547</b>	<b>69.435</b>
Financial Income	5.311	4.392	4.267
Financial Expenditure	(3.675)	(3.904)	(3.574)
<b>Income from services</b>	<b>56.989</b>	<b>52.035</b>	<b>70.128</b>
Tax	(6.071)	(4.856)	(6.811)
<b>NET INCOME</b>	<b>50.918</b>	<b>47.179</b>	<b>63.317</b>
Profitability (Dobit/Prihod) *100	11.32	11.40	11.87
Cost-effectiveness (Revenue/Expense)	1.13	1.14	1.18

Source: According to the audit report of Telecom BH, author's processing.

From the previous balance of income, we can see that sales revenue in 2020 was reduced, and it arose as a result of a decrease in the number of pre-paid users on mobile technology and a decrease in wholesale revenues and expenses. The decrease in revenues from the sale of services was also reflected in the reduction of service costs, advertising costs, employee costs, depreciation and other costs. The COVID-19 pandemic had a negative impact on gross profit in 2020 by 4.954 million compared to the previous year.

In the segment of expenses for 2021, the largest percentage of 36% of total costs belongs to the costs of salaries and payment of taxes and contributions for employee benefits, 28% belongs to depreciation costs related to the impairment of buildings, networks, exchanges and transmission devices, followed by other costs of 36%. Other costs of the company include the costs of program content, international costs of telecommunications, advertising and marketing costs, banking services and other services.

Total expenditures in 2020 are lower by 1.06% than in the previous year 2019, and in 2021 the value of expenditures decreased by 1% compared to the previous year. The ratio of income and expenses shows an economy coefficient of 1.1, which

means that the company operates with a profit, i.e. that for every KM of expenses, 1.1 of income from the company's operations is realized, if the coefficient is less than 1, then it would mean that the company operates at a loss.

The realized profit for the period from January to December 2021 amounts to KM 70.1 million and is higher by 35% or KM 18.1 million compared to the realized profit in the period from January to December 2020 when it amounted to 52.0 million. In 2021, the company made a profit of 63.318 thousand, and earnings per share are 0.998 (BAM).

The following table provides an overview of realized income and expenses, as well as realized profit before depreciation, financial income/expenses and corporate income tax (EBITDA) and profit before financial income/expenses and corporate income tax (EBIT), gross profit.

**Table 3.** Contribution to the Reporting Profit & Loss statements (in 000 BAM)

DESCRIPTION	31.12.2019	31.12.2020	31.12.2021
Operating income	473.788	451.780	466.084
Operating expenses	298.891	299.986	298.735
<b>EBITDA</b>	<b>174.897</b>	<b>152.794</b>	<b>167.349</b>
Amortization and reserving costs	117.908	101.193	98.453
Expenses from previous years – depreciation	2.849	774	478
<b>Total depreciation</b>	<b>120.757</b>	<b>101.967</b>	<b>98.931</b>
<b>EBIT</b>	<b>54.140</b>	<b>50.827</b>	<b>68.418</b>
Financial Income	6.696	5.344	5.550
Financial expenditures	3.847	4.136	3.839
<b>GROSS PROFIT</b>	<b>56.989</b>	<b>52.035</b>	<b>70.128</b>
Bruto Margin	8.0%	9.0%	13.0%

Source: Data from the audit report of Telecom BH, processing by the author's of the paper.

\*Note: The amount of subsequently determined expenses from earlier depreciation periods is excluded from the amount of operating expenses.

The epidemiological situation caused by the Covid-19 virus has carried over to 2021. A significant decrease in operating costs led to the fact that there was no negative impact of the pandemic on gross profit in 2021, i.e. there was an increase compared to the previous year, which we can see from the previous table, i.e. there was an increase in gross profit if we compare with the data from the previous year 2020, which leads to the conclusion that the impact of the pandemic on BH Telecom's business was not negative. The gross margin in the previous table partly shows the increase in net profit in 2021. by 4% compared to the net profit generated in 2020. In 2021, the Company made a reduction in the value of inventories of investment equipment that had not been consumed for one or more years, which was reflected in the result in 2021 in such a way that the reduction of depreciation leads to a decrease in the tax base, and thus indirectly affects the realized profit.

According to the available information from the company's financial statements, depreciation and impairment of fixed assets is calculated according to the straight-line method, when its book value amounted to BAM 518,013 thousand.

For a better presentation of the ratio of individual categories of assets to the total fixed assets of the company, we used chart 4.8 where we can see that at the end of 2019, the net value of fixed assets was 518,013 BAM, of which the largest part of

fixed assets are networks 36%, followed by buildings with 32.9%, followed by switchboards with 14% and other assets with 13.4%. Thus, we see that the company allocates significant funds in the construction of buildings, headquarters, and this trend has not slowed down in 2020, according to the audit report, the COVID 19 pandemic has not significantly affected the company's investment in long-term assets.

**Table 4.** *Cash Flow (in 000 BAM)*

Bussiness activities	31.12.2019	31.12.2020	31.12.2021
Net income	50.918	47.179	63.317
Amortization	111.287	95.239	92.272
Cash flow	162.205	142.418	155.589
Changes in stock (+/-)	(1.007)	(3.622)	(169)
Change in receivables from customers (+/-)	(27.498)	31.480	(5.072)
Changes in other receivables	129	(2.665)	(372)
Accrued receivables (+/-)	(12.645)	(9.184)	(10.682)
Account payables (+/-)	18.492	(24.937)	3.803
Change in other receivables. (+/-)			
Changes in Passive Accruals (+/-)	312	50	707
<b>Cash flow from operating activities</b>	<b>139.988</b>	<b>133.540</b>	<b>143.804</b>
Property, plant, machinery & equipment	(144.047)	(49.009)	(72.076)
Procurement of intangible assets	(1.311)	(4.194)	(4.508)
Other income from investment activities	5.557	4.590	4.488
<b>Cash flow from investing activities</b>	<b>(139.801)</b>	<b>(48.613)</b>	<b>(72.096)</b>
Increase/(decrease) of long-term financial placements	(54.600)	30.500	(27.900)
(Increase/decrease in short-term financial placements	32.361	(60.159)	57.189
Deferred tax funds			
Reserves	(5.785)	(5.676)	(6.139)
Long-term liabilities	(1.770)	(61)	148
Short-term liabilities	(11.879)	(9.898)	(5.893)
(Capital and Reserves) Dividend Paid	(35.040)	(35.980)	(85.729)
<b>Cash flow from financial activities</b>	<b>(32.487)</b>	<b>(81.274)</b>	<b>(68.324)</b>
<b>Increase/(decrease) of money and cash equivalents</b>	<b>3.469</b>	<b>16.918</b>	<b>17.692</b>
Cash and cash equivalents at the beginning of the year	23.553	20.084	37.002
Cash and cash equivalents at the end of the year	20.084	37.002	54.694

Source: According to the audit report of Telecom BH, processing of the author of the paper.

From the previous cash flow, we can see that in 2019, which is for most companies or companies in BiH as a “comparative value” on the basis of which we observe all future years, precisely because of the impact of reduced business activities during the pandemic and recovery, which is still ongoing. In 2019, cash flow from the company's operating activities was ~ 140 million, and in 2020 there was a decrease of 6 million and 488 thousand at the expense of a decrease in business activities.

In 2021, cash flow from operating activities was \$143 million, exceeding the 2019 cash flow and allowing the company to invest and service its shareholder liabilities.

### **Valuation on the Example of BH Telecom**

The valuation of Telecom BH will be made based on the method of discounting the company's cash flows according to the method developed by the respected economist of today, Aswat Damodaran. (Damodaran, 2006).

A method of discounting the cash flow by the weighted average cost of capital for the projected free cash flow with a stable growth rate obtained by the average of the growth of the previous period. Given that BH Telecom is a company that is not financed through debt, but with its own capital, Prof. Damodaran uses the FCFE method, i.e. free cash flow to capital, which will give a value that will be higher than if the DDM model was used, i.e. discounting of dividends. (Discounted dividend model). This model of free cash flow to capital is suitable for companies that reinvest significant of their funds in the purchase of shares and shares of other companies.

The projection of free cash flow is for the period from 2022 to 2027. In the calculation of the residual value, a stable growth rate was used, which was determined on the basis of the previous period. The growth rate is based on the percentage of growth in previous years (2019-2021), which was 2% and increased by 0.30% to reach a stable growth rate of 3.5% in 2026 and 2027 projections. The operating margin is projected on the basis of sales and operating income from previous years (2019-2021).

Gross profit is projected based on operating sales revenues, then the segment of sales of goods and expenses for the period from 2019 to 2021, gross margin is determined on the basis of the share of costs in sales revenues of the previous period. All other costs are planned based on their share in the total sales revenue for the period 2019-2021. Other items of the company's operating capital are planned according to their share in the company's operating income.

Depreciation costs are projected according to the share of the same in the total fixed assets for the period from 2019 to 2021. Financial revenues and financial expenditures are projected as an average of the observed period 2019-2021. The company's tax liability is projected at the statutory rate of 10%. Financial short-term and long-term liabilities relate to the LTE license purchased and are minus the annual discount interest

Reinvestment is the practice of buying shares of one's own or other companies' shares using shares or interest to buy additional shares. In the past period, the company actively bought shares of other companies, the projected reinvestment is according to the average of the reinvestment of the previous period. (Damodaran, 2006, p.676).

**Table 5** *Projection of free cash flows using the DNT method (in 000 BAM)*

	2022	2023	2024	2025	2026	2027
Revenue growth rate	2.30%	2.60%	2.90%	3.20%	3.5%	3.5%
Operating income	532.107	545.942	561.774	579.751	600.042	621.044
Operating margin	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%
EBIT	63.853	65.513	67.413	69.570	72.005	74.525

Effective tax rate	8.94%	9.20%	9.47%	9.73%	10.00%	10.00%
Net Income EBIT (1 - t)	58.147	59.485	61.030	62.798	64.805	67.073
(-) Reinvestment (purchase. shares)	35.474	40.596	46.094	52.029	53.850	27.618
FCFE Free cash flow to equity	22.673	18.889	14.936	10.769	10.955	39.455
Cost of capital	6.46%	6.97%	7.48%	7.99%	8.50%	8.50%
Discount factor	0.7036	0.6577	0.6120	0.5667	0.5223	0.4813
PV Discounted Cash Flow	15.952	12.424	9.140	6.103	5.721	18.990

Source: Authors work processing.

The terminal (residual) value, i.e. the final value after the 5th year, or more precisely forever, because the residual value itself is based on the fact that the company will exist forever. The return on equity in the terminal year is 8.50%, we use the return on equity here, because according to the company's financial statements, the company has no credit debts. Which means that the cost of capital is equal to the cost of equity. Cost of equity). The cost of equity was calculated according to the CAPM (CAPM) method. Capital Asset Pricing Model).

**Table 6.** Price of ownership capital.

Unlevered( $\beta$ )*	<b>0.4404</b>
Premija tržišnog rizika BiH	<b>14.86%</b>
(Cost of Equity) = Cijena vl. Kapitala	<b>8.50%</b>

$$3.5 + (14.86\% - 3.5\%) \times 0.4404$$

To estimate the cost of capital for a company that has no debt, so that its cost of capital is made up of the price of equity. According to Professor A. Damodaran, three components are needed: the beta of the company, which was supposed to be calculated on the basis of the movement of the value of the SASX 30 index, and the movement of BH Telecom shares (shares), but given the insufficient number of data on the movement of the BH Telecom index, we were deprived of this information, the unlevered beta, for companies that do not have debt, was taken from the website of Prof. Damodaran. (pages.stern.nyu.edu).

The risk-free interest rate for government bonds, i.e. the price at which bonds are sold, is taken from the website (CBBH). The market risk premium is the difference between the market rate of return on the stock market and the risk-free interest rate for the period 2022. Risk premium on equity (ERP) for BiH available on the website of Professor A. Damodaran. (Damodaran, 2023, Betas).

The book value of the company's shares in 2021 amounted to 571 million BAM, which is 90% owned by the Federation of BiH, and 10% belongs to other legal and natural persons. In the terminal year, the value of the company's shares would amount to 639,374 thousand BAM, in 2021 the real market value of BH Telecom shares amounted to 633,173 thousand BAM, which means that the projected values in the equity budget are not overestimated because the value of shares in the terminal year increased by 0.97%, or 1% compared to 2021. The company's dividends on ordinary shares (shares) are recognized as a liability in the period in which they are granted, which means that they are not paid on a regular basis. For this reason, the dividend discounting model (DDM) is not applicable precisely because of the pay-

ment of dividends when the conditions are created and by the decision of the shareholders' meeting. The Company publishes the basic earnings per share obtained by dividing the profit/loss period by the weighted average number of ordinary shares.

**Table 7.** *Terminal (residual) value (in 000 BAM)*

Term. Vrijednost novčanog toka	39.455
Cijena (vl) kapitala	8.50%
Stopa stabilnog rasta	3.5%
Terminalana vrijednost kapitala	789.091
Diskontni faktor	1.9146
Diskontovana residualna vrijednost	412,129
PV vrijednost akcija	639.374
Prosječni ponderisani broj red. Akcija	63.457
PV Cijena dionice	12.33

Source: Authors work processing.

The stable growth rate is projected according to the average of previous years, as we have previously mentioned, which is 2%, and it increases by 0.30% in the projected period, with a reduced growth rate of 0.10% projected for the first year of the projection (2022). That in the residual period, the growth rate that is for the perpetual period, that is, forever, is 3.5%. To obtain the terminal value of a company, we have the following parameters:

- FCFE6 Free Cash Flow (at Year 6)) 39,454.55 (KM)
- Then, the cost of equity – 8.50%,
- Stable growth rate.

$$\text{Terminal value of capital} = \frac{39,454.55}{(0.085 - 0.035)} = 789,091$$

Given that we have obtained the terminal or residual value of the company in question, and given that we estimate the value of the company from the point of view of the appraiser, then it is logical to determine the implicit value of equity, which is determined by the perceptions of the appraiser and investors. In order to arrive at the implicit value, it is necessary to correct the obtained terminal value, which we arrived at by discounting free cash flows with a discount factor in the period from 2022 to 2027 and the price or cost of equity using the CAPM method.

**Table 8.** *Equity value of JSC (in 000 BAM)*

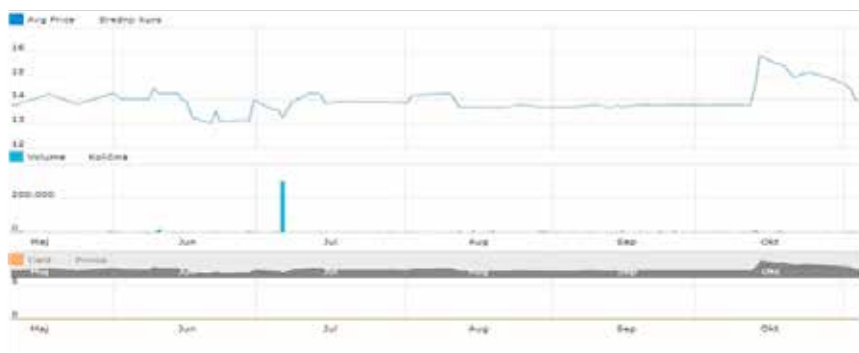
CAPM	8.50%
Stable growth rate	3.5%
Total value of dis. Cash Flow	49.340
Discounted terminal value of capital	789.091
Implicit working capital	838.431
Money and money equivalents	54.694
Deferred tax	-

Long-term fin. liabilities	(53.496)
Short-term fin liabilities	(56.880)
Long-term financial assets	887.790
Short-term financial assets	196.772
Implicit value of equity	782.749

Source: Financial statements of BH Telecom, autor work processing.

Estimated value using the discounted cash flow method compared to the market value of BH Telecom. Telecom BH is a company that places its marketable securities on the Sarajevo Stock Exchange SASE and whose stocks are traded on the mentioned market. The implicit value of the equity we received is 782 million KM, and with the use of the DNT method, and given that BH Telecom has 63,457,358 shares, then we come to a value of 12.33 KM per share in 2022. In the following chart, we can see how BH Telecom shares traded in the period from 5.5.2022 to 5.11.2022.

**Graphic 1.** Overview of trading of BHTRS-Segment (Free Market T1) on the Sarajevo Stock Exchange -SASE



Source: SASE (Sarajevo Stock Exchange) <http://www.sase.ba//Tržište/Emitenti/>

From the previous chart, we can see that in a period of 6 months in 2022, the share price ranged from 13.7 KM as a min. value to 16 KM as the highest achieved value of an action in the observed period. Unlike the market price, the value obtained by the DNT method is 12.33 BAM, which leads to the conclusion that in the valuation of this paper, the stock is undervalued by 10%. Also, in 2021, EPS (earnings per share) was 0.9978, and it shows how much investors are willing to pay for KM earnings, low EPS or P/E (P/E). Price per equity) rationale indicates that the stock is undervalued. On the other hand, we cannot determine on the basis of this parameter alone that the share price is undervalued. Although it can be a “signal” indicating low growth prospects and high investment risk.

One recent example from Prof. Damodaran’s real-world practice is his assessment of Nvidia, a leading company in the microchips and artificial intelligence industry. Prof. Damodaran sold his stake in Nvidia in the month of June 2023, after the shares rose by more than 100% or 4% above the sustainable value in his analysis. As a reason, he stated that for someone who specializes in spotting stocks that are traded below their intriguing, objective value, it is unjustified to hold Nvidia shares



because the share price “pushed” the absolute limit of sustainable value for a year. (Business insider, 2023).

The undervaluation of stocks in this paper is not a big mistake, the standard deviation of stocks for European companies dealing with Telecommunications Services and Services is 26.97%, which is a significantly higher average than the one obtained in this paper. The unwillingness of investors to expose themselves to risk, specifically on the SASE stock exchange, and possibly better and more lucrative investment opportunities than in BH Telecom shares are the reason for the lower share price compared to the achieved market price, but with a positive tendency to bring the value of the shares of the company valued in this paper closer to the market value. (Damodaran spreadsheet, 2023).

### **Advantages and disadvantages in the application of the FCFE model**

In the application of the model of free cash flow to equity, we implicitly assume that the cash flow to equity will be “withdrawn” every year, i.e. that there is no accumulation of cash in the company and we do not have to monitor future cash balances. Also, the main advantage of this model is that we are not tied to management decisions on dividend policies, we can replace free cash flows with capital that will essentially be paid to shareholders. In this way, we become more realistic in estimating the value of a company’s capital.

Another advantage of this model is that cash flows can be negative, especially important for companies/companies that are in the development stage with significant reinvestment needs. (Damodaran, 2006, p.361).

A limitation of this model is that valuers need to project what the net capital expenditure and non-cash working capital needs will be, although it sounds simple to be preceded by an in-depth analysis of the financial statements of the previous period in order to arrive at a projection. Also, if the company/company is financed in part by borrowing, which is not the case in our example, it is necessary to determine how much the company will allocate for new debts in the future. This would not be a problem if societies maintained stable debt ratios, but it becomes more complicated as the ratios of debt and other sources of financing are expected to change over time.

### **Conclusion**

Discounting cash flows in the valuation of a company is a very demanding and detailed process. In this paper, the most demanding part was the design of free cash flows, for which it was necessary to pre-design financial statements, income statements and balance sheet to be able to approach the design of free cash flows. Also, all other assumptions such as the revenue growth rate and the discount rate arrive at the residual or terminal value.

In the course of writing this paper, the key problem was the fact that the joint stock company BH Telecom finances its business with its own capital, then investing in other companies as well as using financial instruments. Since the company is not financed by borrowing, the model that was previously chosen, which is free cash flow discounting to the firm (FCFF), has been replaced by the free cash flow to equity (FCFE) discounting model, which is an alternative version of the dividend discounting (DDM) model.

On the example of the valuation of BH Telecom, an analysis of the financial statements and assumptions that were necessary to arrive at the price of equity was previously made, since the company is not financed by borrowing, we could not apply the calculation of the weighted average cost of capital, instead of the WACC applied by the CAPM to determine the price or cost of equity. Thereafter, the method of discounting the DNT cash flows and projecting the free cash flow determined the residual value. To finally come to the implicit value of equity, which is 782 million BAM, and the share price of 10.08 per share, which seems undervalued, but on the other hand, leaves the possibility of an increase in the share price in some future period when macroeconomic indicators such as GDP, for example, are not at the level of 0.9% for 2023. Given that the economy of BiH, according to the report of the Central Bank of BiH, shows "resilience" to unfavorable movements in economic parameters, it is expected that in the period from 2024 to 2027 it will be able to stabilize economic conditions and approach the GDP growth of 4.1% that was achieved in 2019. In addition to the macroeconomic aggregates such as GDP, inflation, import-export, the share price is also influenced by the perception or behavior of investors, i.e. their willingness to take risks.

With all the analyzed, BH Telecom still remains the leader in telecommunications services in the market of Bosnia and Herzegovina, as indicated by this analysis.

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# The Main Theories And Methods Of Change Management: Literature Review

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**Abstract:** *Change management is becoming increasingly crucial in the face of the proliferation of transformation initiatives implemented to respond to environmental disruptions. Indeed, over the decades, the business world has abandoned its stability to be constantly shaken by various events such as technological advances, the adoption of new regulations, standards related to sustainable development and the evolution of individual needs. This situation encourages the adoption of new working methods...The purpose of this research is to study the domain of in-depth change management adopted by organizations to cope with changes. This article is based on an extensive literature review in the field of change management. Its objective is to explore in detail the various theories and methods related to this crucial field. Drawing on an in-depth analysis of academic works and previous research, this article aims to provide an in-depth understanding of the key concepts, approaches and best practices in change management.*

**Key words:** *change, change management, human resources, communication training, management.*

## Introduction

In a world that is constantly changing, marked by uncertainty and a frantic pace of technological, economic and societal advances, the adaptability of organizations is becoming crucial for their long-term survival. Faced with this unprecedented pressure to change, companies are forced to rethink their methods, which is disrupting attitudes, behaviors and organizational culture. This frantic race towards change, the

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pace of which continues to accelerate, raises questions about its limits and implications. Although change is not new, contemporary organizations are facing a multitude of simultaneous, complex and large-scale transformations. No one is spared by this trend, and it has a profound impact on the various actors involved, generating defensive reactions, resistance, stress and even organizational cynicism when they are not properly supported.

It is in this context that change management finds its importance. Integrated into human resources missions, it aims to assess the organization's capacity to transform itself, to anticipate the levers necessary for this evolution and to evaluate the impact of this process. Change management encompasses the study and practice aimed at guiding organizations in the successful implementation of significant changes, whether it is adopting new technologies, reorganizing teams, introducing innovative processes or redefining the corporate culture.

Research in this field explores a variety of topics, from effective communication to people management, leadership, resistance to change, organizational culture, training and development, risk management, and employee motivation and engagement.

In this context, the central problem of our research is formulated as follows: **What are the main theories and methods of change management that influence the success of transformation initiatives within organizations facing changes ?** In this sense, our objective is to study these concepts in order to propose methods, tools and techniques to support individuals and teams in an effective change process.

This question allows us to draw 3 sub-questions:

- What is the change management?
- What are the fundamental theories of change management and how do they impact organizational transformation initiatives?
- What are the most widespread practical methods in change management and how are they implemented to ensure the success of transformation projects within organizations?

## **Change Management: Key To Evolution And Success**

### ***The change***

The concept of change is as broad as it is varied, encompassing everything from a complete overhaul of the organization to a simple office move. To avoid calling every adaptation and daily evolution a change, we define it in terms of disruption.

According to Autissier and Moutot , *"Change is a break between an obsolete existing situation and a future synonymous with progress"* ( Autissier et al., 2010).

This disruption in operations occurs when several fundamental elements are modified: practices (ways of doing things), working conditions (material environment), tools (IT and management), organization (power structures and functional divisions), business skills (company know-how), strategy (collective objectives targeted and envisaged), and culture (value system).

These transformations influence different actors within the organization:

- Change decision makers are responsible for legitimizing change decisions, thereby facilitating project success in terms of resources, results, and time-lines. They provide crucial support to managers throughout the process.
- Managers, members of staff, are responsible for supervising the activities of a service or even leading a department. They have the power to change the responsibilities of each person as well as the organization of their services.
- Employees represent all personnel involved in the change project. They require appropriate support to adapt to the new guidelines.
- Social actors, such as unions (staff representatives, works council members, union delegates), play a key role in the company by defending the interests of employees.

In management science, change is divided into three aspects: the context (the internal and external conditions of the company), the content (the objectives and missions of the change) and the process (how the change is implemented). The strategic aspect of change, which involves the allocation of resources to modify the competitive balance ( Queille , 2000), has been widely studied to the detriment of its implementation.

These studies have generated a distinct linear model, which clearly separates the organization from its environment and serves as the basis for strategic planning (Ansoff et al., 1976). This is based on an analytical approach focused mainly on technical and economic aspects, breaking down the change process into several stages, from setting objectives to planning actions.

However, the sudden upheavals experienced by companies since the 1970s call into question the " *deterministic* " nature of this approach (Mintzberg, 1994). The organization is no longer seen solely as an agent of production, but also as a social and political entity.

In the human and social sciences, this notion is more complex. Crozier and Friedberg (1977) define it as a systemic phenomenon. They explain that change is neither an inevitable logical stage of human development, nor the simple imposition of a rational model of social organization, nor the natural result of struggles between individuals and their power relations. On the contrary, it is mainly the transformation of a system of action. Furthermore, change must be considered as a sociological problem, implying that it is people who evolve within their communities, rather than individually, thus modifying their mutual relations and their social structures. In business management, change is of capital importance. Companies operate in a context where the environment is dynamic and subject to constant changes, forcing them to adapt constantly in order to remain competitive and relevant on the market.

This change can manifest itself in a variety of ways, whether it is organizational restructuring, the integration of new technologies, expansion into new markets, or the improvement of internal processes. Whatever its form, change enables the company to address emerging challenges, explore new opportunities, and maintain its relevance in a rapidly changing world.

Additionally, the ability to effectively manage change has become a critical skill for business leaders and managers. Successful change management involves anticipating future business needs, mobilizing and motivating employees around change

objectives, and putting in place the structures and processes needed to facilitate the transition.

Change is an essential element of business management, and its proper management is fundamental to ensure the growth and sustainability of the company in a constantly changing competitive environment.

According to Autissier and Mouttot (2003) We can classify the types of changes according to their nature and their progress: In the category of progressive changes, we first distinguish prescribed change, which responds to environmental constraints such as regulations or technological advances. This type of change generally extends over a period of 12 to 36 months and is often linked to initiatives such as adaptation to the transition to the year 2000, the adoption of the euro or the implementation of the 35-hour working week. Then, we find constructed change, which occurs through organizational developments aimed at modifying the perception that actors have of their company. This type of change can extend over a period of 1 to 10 years and can involve initiatives such as the creation of a customer-centric culture, the improvement of quality or the redesign of internal processes.

In the category of abrupt changes, we first encounter crisis change, which occurs in response to a major malfunction such as an accident, a strike or customer complaints. This type of change generally occurs quickly, over a period of 1 day to 3 months, and aims to find an immediate solution to the problem. Then there is adaptive change, which involves a transformation of practices and the organization to adjust to new circumstances or requirements. This type of change can last from 6 to 18 months and may involve the adoption of new IT tools or the development of business skills.

### ***Change Management***

The implementation of change encounters obstacles. In order to carry it out successfully and overcome the resistance that may emerge, various actions and operations must accompany this process, thus ensuring an effective transition and adequate appropriation by stakeholders. This principle is encapsulated in the concept of change management, a mission that requires the explicit formulation of well-defined projects (Balogun & Hailey, 2005). In this perspective, Bec et al. (2007) introduce the concept of change facilitation, which is at the crossroads of several fields such as change management, project management, organizational dynamics and the sociology of institutions (Bec et al., 2007). This process necessarily involves the intervention of an external third party (Bec et al., 2007), who observes, understands and supports the actors concerned from a distance.

Attention to change management has been revived by the advent of information and communication technologies, which have profoundly transformed the functioning of organizations, requiring increased circulation and production of information (Autissier et al., 2010). This development has led to a somewhat chaotic proliferation of projects, which can sometimes lead to breakdowns in understanding and adherence (Autissier et al., 2010). Consequently, interest in the need for change has gradually given way to concern about how to manage this change, particularly since the 1980s and 1990s.

Within the debates on change, there are some who maintain that it is a planned process and others who argue that it is managed despite the emergence of unforeseen

phenomena, change management is recognized for its crucial importance. Indeed, according to Autissier and Moutot (2007), change management is defined as "a set of methods and tools to get beneficiaries to adhere to the objectives of a project" or as "a method of organizing change in order to succeed". In addition, change management has three main objectives: first, it seeks to obtain the adhesion of employees to change at the individual level; then, it aims to transform group practices in favor of change; finally, it strives to ensure the evolution and maintenance of the company's progress over the long term.

The concept of "change management" has mainly emerged in the context of IT projects, particularly with projects to implement integrated management software packages (ERP for Enterprise Resources Planning) ( Autissier et al., 2010). Indeed, during the 1980s and 1990s, IT evolved from programming to the provision of standardized solutions through companies specializing in application development ( Autissier et al., 2010).

### ***The Challenges Of Change Management***

Over the past two decades, the landscape of organizational projects has undergone a profound transformation, placing change at the heart of concerns ( Autissier et al., 2010). It is now undeniable that many, if not all, organizations are undertaking changes of various natures (Balogun, 2001). Despite this trend, the success of these changes remains below expectations, with some estimating that only about 70% of them achieve their objectives, mainly due to unforeseen outcomes that may emerge in interaction with the context (Balogun, 2006).

It is important to know the lack of awareness regarding the importance and complexity of the change implementation phase compared to its design, also for strategic projects that require a profound transformation of culture, behavior and attitudes within the organization (Balogun, 2001). Human resources play a determining role in this process, because effective change only occurs when individuals, both managers and subordinates, adapt their operating methods (Balogun, 2001). In this perspective, adherence becomes a major issue ( Autissier et al., 2010), emphasizing the crucial importance of effective management and appropriate change management to maximize the chances of success. Thus, it has become imperative for organizations to develop their capacity to change, which is no longer a simple option but an essential requirement ( Autissier et al., 2010). Change management therefore aims to equip oneself with an arsenal of concepts, methods and tools to ensure the successful implementation of the project, by understanding and mastering the change process in order to achieve the objectives and expected results (Faurie, 2008).

Change management aims to avoid unproductive costs and risks by ensuring the commitment and buy-in of all stakeholders involved ( Autissier et al., 2010). It also seeks to reduce barriers and address needs related to change, particularly with regard to human resistance, employee motivation and commitment levels, time constraints, limitations in terms of material and financial resources, the adjustment of projects to field realities and specific requirements, as well as the need for appropriate methods ( Bec et al., 2007).



## Theories of change management

### Paradigms of change management

As the notion of change has developed over time, that of change management has seen the presence of several currents that Autissier has grouped into five, namely: The sociological paradigm, The instrumental paradigm, The managerial paradigm, The strategic -organizational paradigm and The experiential paradigm.

Table 1: Paradigms of change management

Paradigm	Period	Description
Sociological	50s	Kurt Lewin emphasizes that to achieve change it is necessary to evolve norms within groups, emphasizing dialogue and communication within organizations.
Instrumental	80s	Change management is done through outsourced projects, where external consultants play a key role. Kanter's "wheel of change" (1992) identifies levers such as communication and training.
Managerial	90s	This paradigm emphasizes the internal capitalization of skills and tools for change management. Pettigrew (1990) and Kotter (1996) emphasize the importance of continuity of change and managerial leadership, and criticize the instrumental paradigm
Strategic -organizational	2000s	The introduction of the contextual dimension of changes by Pettigrew (1990), Rondeau (2008), Bareil (2004) and Autissier et al. (2012) transforms change management into a skill and a profession requiring a differentiated approach.
Experiential	2010s	This paradigm, supported by Armenakis (1999) and Autissier and Giraud (2013), considers change as an opportunity, where the development of the capacity of actors to change is encouraged by experiential devices.

Source: Developed by the author

## Theories of change management

### The theory of change

"A theory of change ( ToC ) is an explicitly documented (and therefore assessable) vision of how change is thought to occur. " **Rick Davies** So The Theory of Change ( ToC ) provides a clear and detailed perspective on how change should be realized in a specific setting. This methodical approach details the steps, processes and essential elements to achieve a defined objective, thus providing the possibility of precise evaluation and adaptation according to the results obtained. In short, the ToC provides a detailed roadmap of the actions and strategies necessary to induce the desired change, thus facilitating a rigorous evaluation of its effectiveness and allowing continuous adaptation in the face of emerging challenges and needs.

Change theory often cites three founding models of organizational change. They present the process of change in phases. These are the Lewin model (1940), the Weick model (1969) and the Kotter model (1996) and the ADKAR model (1990)

- **Lewin's model**

According to Lewin (1951), the process of change involves the convergence of two forces, those that promote change and those that counteract it. Thus, he proposes a three-phase model:

- Unfreezing : This phase begins when the organization's actors become aware of a gap between the organization and its environment. It is characterized by questioning and a change in perception, marked by instability and insecurity, leading to the decision to change .
- Change (Move): This stage marks the move to action of change and transformation, aimed at reducing resistance.
- Recrystallization (Freezing): This phase aims to consolidate change, institutionalize new practices and integrate new behaviors to avoid a return to the previous situation.

- **The Weick model**

The model proposed by Weick in 1969 is broken down into three distinct stages:

- Variation : During this first phase, actors collect data about their environment while focusing on certain aspects, while trying to filter out certain elements that they consider objective. This step is based on the idea that the environment is a social construction of the actors within the organization.
- Selection : After processing the information collected, the actors select those they consider most relevant in relation to the given context.
- Retention : In this final phase, actors retain interpretations that may be useful in the future, which are likely to influence future actions.

- **The Kotter Model**

Kotter's 1996 model breaks down into eight key steps:

- Create a sense of urgency: This phase involves persuading the organization's stakeholders of the imperative for change by highlighting the disadvantages of the current situation and the advantages of the future one.
- Build a strong leadership team: Building a team with the skills to lead the change is essential. This team must be engaged and unified to ensure the success of the process.
- Develop a Vision and Strategy for Change: A clear vision and a well-developed strategy are essential to successfully implement change. A gap analysis between the current situation and the desired situation is essential to establish an effective strategic plan.
- Communicate and share the vision of change: The vision must be communicated in a clear and concise manner to ensure its support by all stakeholders involved.
- Encourage employee empowerment for broader action: It is crucial to involve employees in the change process by strengthening their skills and supporting them in adopting new behaviors.
- Achieving short-term benefits: This step aims to quickly demonstrate the positive results of the change to the stakeholders involved. It is important to recognize and reward the efforts of the various contributors to these successes.

- Reinforcing gains to drive change: Building on early progress, there is a need to consolidate change and advance it to more advanced levels, such as organizational structure and policies, to align them with the overall vision while encouraging greater stakeholder engagement.
- Embed new approaches into organizational culture: New behaviors must be integrated and rooted in the company culture. This may result in a cultural change at the end of the process or as a result of the recognition of post-change benefits.

- **The ADKAR model**

The ADKAR change management model, developed in the 1990s, stems from an in-depth analysis of change initiatives over a long period of time.

- Awareness : This involves informing employees about the need for change, providing them with clear explanations of its reasons and implications. This allows the organization to understand the urgency and importance of the change.
- Desire: Once awareness of the need for change has been established, it is crucial to generate a desire for change among members of the organization. This is done by communicating the benefits and opportunities of change and by encouraging individual commitment and motivation.
- Knowledge : After creating the desire for change, it is necessary to provide employees with the knowledge and skills required to effectively make the change. This may involve training and clearly communicating new methods and practices.
- Ability : Ability refers to the practical ability of individuals to implement change in their daily work. This requires moving from theory to practice, providing the resources, support, and autonomy needed for employees to apply their new skills.
- Reinforcement : To ensure the sustainability of change, it is crucial to reinforce new methods and behaviors. This involves rewarding and recognizing behaviors consistent with the change, adjusting systems to support new practices, and providing ongoing support to individuals during the transition.

### **The theory of diffusion of innovation**

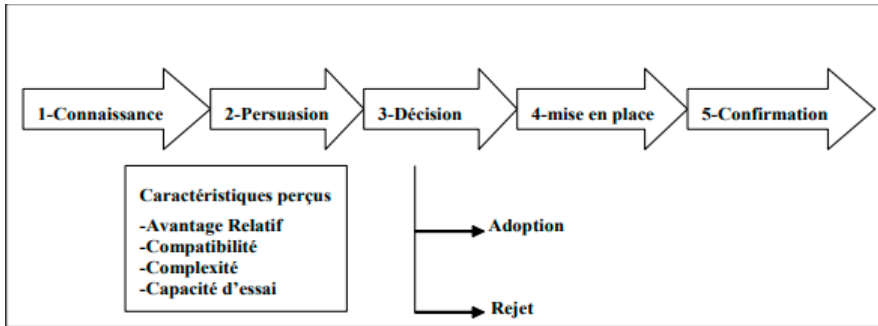
Everett Rogers conceptualizes innovation as "*the process by which an innovation is communicated, through certain channels, over time, among the members of a social system*" (see Rogers, 1995). Innovation within organizations is known as change because it aims to improve, transform or develop the usual ways of doing things. This is why change management is effective in facilitating the adoption of these transformations and the acceptance of ideas and practices within an organization.

The diffusion of innovations theory provides an important framework to guide change management. By discerning the different phases individuals go through when adopting a change, this model allows change managers to anticipate reactions and implement more effective communication and engagement strategies. This promotes faster and more successful adoption of change within the organization.

In the change adoption process, E. Rogers' model shows that individuals go through five phases:

1. Awareness: Individuals become aware of change or innovation and respond based on their personal perception and social norms.
2. Commitment: This phase marks the moment when the individual positions himself in relation to the change, based on its relevance, its compatibility with existing practices, its complexity, its observability and its capacity to produce tangible results.
3. Decision: Individuals explore and reflect to decide whether to adopt or reject the change.
4. Implementation: Individuals may need support to overcome uncertainties and resistance associated with implementing change.
5. Confirmation: Finally, they seek information and feedback to confirm their decision and strengthen their commitment to change.

**Figure 1:** *Adoption process*



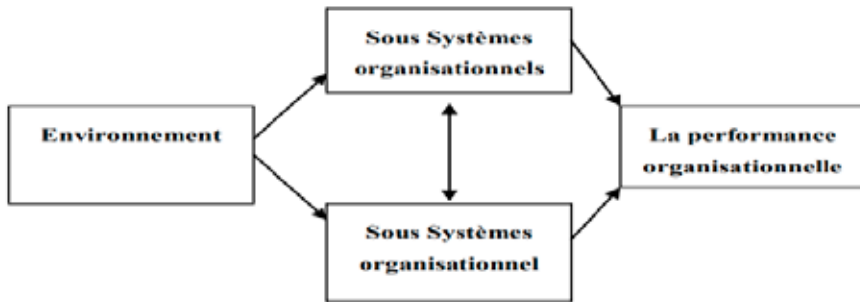
Source: Rogers (1983) Adapted by Brancheau and Wetherbe, (1990)

## **Contingency theory**

Having explored several influential theories on how to manage and lead change, we now turn to contingency theory. Unlike previous theories that recommended universal management models (KOTTER, LEWIN, WEICK, ADKAR, ROGER), contingency (1960s) brings a new perspective, this theory suggests that the appropriate organizational structure depends on various contingent factors such as technology, the external environment and organizational culture.

In the exposition of the simplified model of contingency theory, researchers have paid special attention to two main variables: the influence of variables on the structure of the organization and the effect of the structure of subsystems on the organization. This approach has prompted various subsequent studies aimed at exploring these aspects in more depth. For example, Lawrence and Lorsch (1967) analyzed the impact of the environment on the organization, while Burns and Stalker (1961) examined how the environment influences organizational structure. Similarly, Woodward's (1965) study revealed the impact of technology adoption on organizational structure. Weill and Olson (1989) also enriched this understanding by examining the implications of these variables on organizational structure.

**Figure 2:** *A simplified model of contingency theory in organizational research*



Source: Weill and Olson, (1989)

In change management, contingency emphasizes the importance of adapting strategies to each specific context. It encourages managers to consider contextual variables such as organizational culture and the external environment. This approach allows for adjusting change strategies to meet the unique needs of each organization. Contingency challenges the idea of a uniform management approach, recognizing that each organization is unique and requires a specific approach. It emphasizes the adaptation of management practices to the particular circumstances in which each organization operates.

Contingency theory allows managers to better design effective and adapted strategies. Instead of following a predefined model for all cases, they can adjust their approaches according to the specific needs of each situation. This approach increases the chances of success in implementing significant and lasting changes within organizations.

## **Methods of change management**

### ***The levers of change management***

To implement changes within organizations, three main and essential levers emerge: communication, training and support.

- **Communication**

Internal marketing and communication play a vital role in any change process within organizations. For Bateson (1972): communicating “is to construct with words a simulacrum of reality”. Rather than simply communicating in a linear manner, it is crucial to adopt an internal marketing approach, taking into account different audiences and adapting to their specific needs. Communication must be strategic, with clear objectives defined from the outset, and it must be designed in such a way that it can be understood and assimilated by all the actors involved. It is necessary to pay attention to potential barriers to communication, both on the part of the senders and the recipients, to avoid misunderstandings and distortions. Change management processes have at their disposal different communication tools such as documentation, posters, leaflets, websites, forums, as well as conferences and meetings. The choice of these tools will depend on the target audience and the level of

interaction desired. It is important to select the right message, to broadcast it at the right time and through the right media for each identified group, in order to create an effective “com mix”.

- **The training**

In change projects, training is an essential lever from the outset, as it aims to provide stakeholders with the knowledge needed to effectively perform their new tasks. To determine training needs, it is crucial to understand the gap between the skills required and those already acquired. Depending on these identified needs, different types of training can be offered, whether conceptual, methodological or functional. The choice of training medium, whether e-learning or face-to-face, as well as the location, internal or external, must also be taken into account in the development of the training plan.

The quality of the training delivered is paramount, and it is important to gather feedback from trainees to ensure its effectiveness. E-learning offers significant technological advantages, providing learners with flexible access to training content without disrupting their daily activities. This flexibility allows training to be tailored to the specific needs of the business. While e-learning is often more cost-effective than face-to-face training, it is crucial to remember that the real return on investment lies in the quality of learning and learner satisfaction.

In a change management project, training represents a significant financial investment, but it is generally more cost-effective than communication, with a cost-benefit ratio estimated at one to three.

- **The accompaniment**

During a period of change, support is of paramount importance to establish a relationship of trust with all parties concerned. This approach is achieved through three main areas: impact processing, individual coaching and the development of new management tools.

Impact processing involves collective support aimed at identifying the areas affected by the change and the resulting gaps. This assessment can take the form of impact sheets completed by key stakeholders or brainstorming sessions. Coaching, for its part, consists of personalized support aimed at helping managers better understand the mechanisms of change. It is based on a series of structured interviews around nine questions on the decisions taken, the implementation and monitoring of the change, with the aim of establishing a relevant action plan.

However, the stakeholders' adherence to change is not always guaranteed. In this context, the creation of new management tools may be necessary to change the perception of the professional environment. These tools offer a new perspective on activities in time and space, which encourages rethinking existing practices and their objectives. By adapting the tools, stakeholders are encouraged to reflect on their practices and adjust them accordingly.

### **Typologies of change management approaches**

Change management analyzes the organization's ability to respond to changes, and puts in place the levers necessary for this transformation and measures the re-

sults. (Autissier and Guillard, 2012) propose four styles developed according to the typologies of change:

- The Education/Communication style involves reaching out to all stakeholders to provide them with the necessary information about the change and working with them to adjust the affected working methods. This type of change is usually "adaptive" (either abrupt or voluntary), and change management is often outsourced to large consulting firms.
- The Collaboration/Participation style aims to explain the change and involve stakeholders in its implementation. Collaboration is achieved by integrating the change into the stakeholders' daily practices. This type of change is rather "constructed" (either gradual or voluntary), and the missions are generally carried out by smaller consulting firms focused on psychology.
- The Intervention style involves an explicit change constraint. It involves developing an approach to achieve change while ensuring its acceptance. A project team develops a method while a working group proposes and implements solutions. This type of change is often "prescribed" (either incremental or imposed), and change management is generally entrusted to large consulting firms.
- The Direction/Coercion style involves setting up a small team to quickly resolve the problem causing the crisis and come up with a viable solution. Command is centralized and external input is primarily expert advice. This type of change is a "crisis" change (either abrupt or imposed) led by internal teams with specialists.

Change management cannot be addressed independently of the social context in which the change occurs.

### **The change management process**

According to Autissier and Moutot : *"Change management is materialized by carrying out a diagnostic phase, deploying levers (impact study, communication plan and training plan) and steering change."* ( Autissier D. et al. Change management)

- **The diagnosis**

This step is a crucial step in any change management process, regardless of the approach adopted. Experts agree on its importance for understanding the existing culture and its foundations. According to Kotter and Schlesinger, this preliminary analysis helps to identify the contours of the change. Autissier adds that the diagnosis aims to delimit the scope of the change, to size it and to choose the most appropriate change organization accordingly.

This diagnostic process involves developing a framework note, which defines the reasons for the change, its objectives, the findings that justify it, as well as the expected results in terms of gains and risks, and a mapping of the stakeholders involved. The sizing of the change then consists of evaluating its depth (intensity) and its scope (magnitude).

- **Supporting change**

In the coaching process, communication and training play essential roles. Communication is the crucial starting point, constituting the first contact between the change initiators and other stakeholders requiring information about the project. According to Bateson (1972), communicating consists of creating a representation of reality through words. In the absence of effective communication, individuals will feel isolated and unaffected by the change. In addition, inadequate communication can lead to misunderstanding, lack of buy-in and strong resistance.

Training, on the other hand, aims to support users in the appropriation of the new tool. Before planning the training format, it is essential to identify training needs and define the target, in order to guarantee personalized and effective training.

- **Change management**

The change management phase essentially consists of two main points:

- **Resistance Management:** Change is not always accepted by people. Often, there is resistance that needs to be managed. According to Dolan et al, 1996: resistance to change is defined as “*the individual or collective attitude, conscious or unconscious, that manifests itself as soon as the idea of a transformation is evoked and represents a negative attitude adopted by employees when changes are introduced into the normal work cycle*”. To clarify, resistance to change is a negative individual psychological reaction towards innovation in work, seeking to hinder the change process. According to Carton (2004), this resistance can take four distinct forms:
  - **Argumentation:** a rational approach based on negotiable arguments.
  - **Inertia:** difficult to detect, often referred to as “hypocritical adherents”.
  - **Revolt:** an aggressive opposition that can use power to oppose change.
  - **Sabotage:** A form of resistance that lies between revolt and argument, where opponents use real facts to thwart change.

Resistance management is carried out in two stages: first, establish a map based on the actor's position regarding change and power:

Then analyze it and search for the sources of resistance in order to eliminate it with the most appropriate actions: “*Communication and education, support and simplification, negotiation and agreement, involvement and participation, and manipulation*” Kotter and Schlesinger (1979).

- **Change assessment:** based on the ICAP model of Autisier and Moutot (2007), which assesses the rates of information, understanding, adhesion and participation of the actors using a questionnaire. This barometer makes it possible to measure the degree of involvement of the actors in the change.

## **Conclusion**

Change management remains a little-discussed but crucial issue, because we are constantly immersed in a changing environment, characterized by its instability and opacity. Change involves the implementation of modifications within the organization, which can be large-scale or minor, global or partial, sudden or gradual.



Its objective is to adjust the functioning of the organization to changes in its context or environment. This notion is of capital importance, both in the private and public sectors, because the world is constantly changing. Today more than ever, organizational immobility means an increased probability of disappearance from the economic landscape.

In order to enrich our understanding of the subject of change management, this article is initially based on the exploration of the main theories and methods. However, for a more in-depth and concrete analysis, we also plan to carry out a practical study, adopting a qualitative methodology. This dual theoretical and practical approach should offer a more complete and nuanced vision of change management.

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# Contemporary Management, Circular Economy and Sustainable Development as Paradigm of the Future

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**Abstract:** *In today's business world, contemporary management, circular economy and sustainable development are gaining more and more importance and becoming the paradigm of the future. This research will show how these concepts interact and how they can contribute together to the creation of a more sustainable global economic system. Contemporary management focuses on efficiency, innovation and responsibility to interest groups, which achieves long-term competitiveness and profitability of organizations. In the context of the circular economy, the emphasis is on minimizing waste and efficient use of resources, which directly supports the goals of sustainable development. Sustainable development, on the other hand, strives for a balance between economic, social and environmental aspects in order to meet the needs of today's generations, without jeopardizing the opportunities of future generations. The combination of these paradigms can create positive synergistic results. For example, implementing a circular economy requires innovative approaches in supply chain management, which reduces costs and negative environmental effects. At the same time, contemporary management can support sustainability by integrating social responsibility into business strategies and practices. In the future, these paradigms will open more and more new business opportunities. Companies that successfully integrate the circular economy into their operations can create a competitive advantage in a market that increasingly values sustainability. At the same time, management that relies on the principles of sustainable development can attract investors and customers who are increasingly responsible and aware of social and environmental problems. It is concluded that contemporary management, circular economy and sustainable development represent integrative*

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*approaches that can transform the way of business and live. Their implementation requires changes in organizational culture, technology and regulatory framework. Promising results in the form of better environmental protection, social justice and economic stability make them indispensable for the future of global business.*

**Keywords:** *management, circular economy, sustainable development, paradigm, environment.*

## **Introduction**

Social and economic challenges are rapidly multiplying in the modern world. Concepts of the contemporary management, circular economy and sustainable development are becoming key pillars of the future paradigm in this world. These concepts are not just theoretical frameworks, but offer practical guidelines for transforming the way we do business, spend resources and think about development (Stevović et al. 2014). Contemporary management, with its focus on innovation, digitalization and agility, enables organizations to quickly adapt to changes and respond to the complex challenges of the globalized market.

The circular economy (Stevović et al. 2021), on the other hand, represents a radical shift away from the traditional linear model of "take, produce, throw" towards a system that promotes the renewal and reuse of resources. This economic paradigm aims to reduce waste, conserve natural resources and minimize the ecological footprint by closing material flows. Through the principles of product design for longevity, recycling and renewal, the circular economy provides a more sustainable and environmentally responsible framework for economic growth.

Ultimately, sustainable development (Lozano, 2024) integrates these concepts into a holistic approach that seeks to meet the needs of present generations without compromising the ability of future generations to meet their own needs. Sustainable development combines economic, social and environmental dimensions, thus creating a balance between growth and preservation of the planet.

In synergy, contemporary management, circular economy and sustainable development form a future paradigm that promises a better, fairer and more sustainable future for all. Businesses, governments and society as a whole must recognize the importance of these concepts and work together to implement them to ensure the long-term prosperity and health of our world.

As part of this research, glaring examples of positive practice from around the world about successfully applied methods of contemporary management, principles of circular economy and consistently implemented sustainable development will be presented in this manuscript.

## **Methodology**

This research paper summarizes the results of the latest cutting edge in the fields of management, circular economy and sustainable development. The research in

this paper is based on desk research with case study methodology of the positive world practice.

The goal is to answer the following questions from the perspective of the declared green transition towards sustainable future:

- How contemporary management methods can contribute to a better, more sustainable future
- How the implementation of circular economy principles contributes to increasing sustainability?
- What are the best practice case studies in the world?

The methodological holistic approach to research in this manuscript includes a complex and organized procedure, starting from logical principles and principles according to established phases. For the purpose of creating this work, the following general and special scientific methods are used:

- Systematized analysis of the latest existing, world-recognized scientific results in the field of management, strategic management, environmental protection, circular economy and sustainable development;
- Methods of induction and deduction, analysis and synthesis, as well as the method of analogy.

## **Results and discussion**

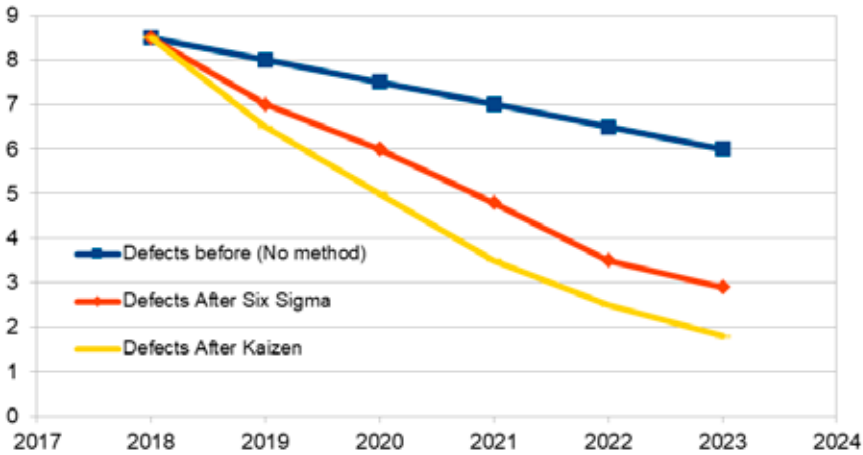
### ***Results of implementation of contemporary management methods***

The implementation of contemporary management methods brings a wide range of positive results that significantly improve business performance and the competitive advantage of organizations. One of the key results is improved operational efficiency. Through the implementation of agile methodologies and lean principles, companies are able to reduce unnecessary costs, optimize processes and shorten the time required for the development and placement of new products on the market. For example, companies that use methods such as Six Sigma and Kaizen (Das, 2024) see a reduction in manufacturing defects and an increase in the overall quality of their products and services. Picture 1 shows the values of the reduction of production defects after the implementation of the Six Sigma and Kaizen methods in the period from 2018 to 2023<sup>3</sup>. Before the introduction of the methods, the defect rate was constant or decreased slowly, while after the introduction of Six Sigma and Kaizen methods, the defect rate decreased significantly.

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3 Ellen MacArthur Foundation

**Picture 1.** Reduction in Manufacturing Defects (%) with Six Sigma and Kaizen methods



Source: Data used from Ellen MacArthur Foundation

In addition to operational efficiency, contemporary management emphasizes the importance of innovation and continuous improvement. By using innovation management tools, such as design thinking and brainstorming sessions, organizations manage to generate new ideas and solutions that meet changing market needs. This approach not only improves customer satisfaction, but also creates new revenue streams and differentiates the company from the competition.

Contemporary management also emphasizes the importance of human capital. Investing in employee development through training, mentoring programs and opportunities for professional growth results in greater employee engagement and satisfaction. Organizations that apply such methods record a lower staff turnover rate, increased productivity and better mutual cooperation of teams. For example, companies that focus on leadership development and time management skills in their managers achieve better coordination and efficiency in project implementation.

Also, contemporary management supports decision-making based on data. By using advanced analytical tools and big data technologies, managers can make informed decisions that are supported by relevant and accurate data. This leads to a reduction in risk and enables organizations to respond quickly to market changes and opportunities.

Finally, the application of contemporary management also contributes to the social responsibility of the company. A focus on sustainability, ethical business and social responsibility enhances the company's reputation and builds trust among consumers, investors and the community.

Overall, the results achieved by applying contemporary management methods clearly indicate their importance in achieving operational excellence, innovation, human capital development, making informed decisions and strengthening social responsibility. These results are crucial for the long-term success and sustainable growth of any organization in a dynamic and competitive business environment.

### ***The effects of introducing the circular economy***

The circular economy represents a paradigm shift in the way we think about production, consumption and resource management (Stevović et al, 2021). Unlike the traditional linear model of "take, produce, throw away," the circular economy aims to close material flows and create a sustainable system that minimizes waste and maximizes the use of resources. The application of circular economy principles brings numerous significant results that are reflected in ecological, economic and social benefits.

One of the key results of applying the circular economy is a significant reduction in waste. By designing products that are more durable, easier to repair, recycle or reuse, companies manage to extend product life cycles and reduce the amount of waste that ends up in landfills.

**Table 1.** *The impact of designing more durable products, as well as the possibility of repair, recycling or reuse on waste reduction*

<b>Product Design Aspect</b>	<b>Impact on Product Life Cycle</b>	<b>Environmental Outcome</b>
Product Durability	Extends product use before it becomes waste	Reduces the need for new production
Ease of Repair	Increases the ability to repair rather than replace	Lowens the amount of waste in landfills
Recycling	Facilitates reuse of materials from products	Reduces the extraction of raw materials
Reuse	Allows products or components to be used again	Extends the product's life cycle
Reduced Resource Consumption	Decreases the need for new materials and energy	Lowens carbon emissions
Less Waste to Landfills	More efficient use of products and materials	Less waste ends up in landfills

*Source: Author's analysis and synthesis*

The Table 1 highlights different aspects of environmentally friendly product design and their positive effects on the environment by extending the product's life cycle and reducing waste. Companies that implement product return and recycling programs manage to reduce their environmental footprint and contribute to the conservation of natural resources.

Also, the circular economy encourages more efficient use of resources. Through strategies such as sharing, reusing, repairing and recycling, resources are used in an optimal way, which reduces the need to exploit new raw materials. This not only contributes to the conservation of natural resources, but also reduces the energy costs associated with the production of new materials. For example, by using recycled materials in production processes, companies can reduce energy consumption and carbon dioxide emissions.

The economic benefits of the circular economy are also significant, see Table 2. This table provides specific economic benefits that large companies have achieved through the application of the circular economy, including cost reductions and profit increases.

**Table 2.** Numerical examples of increasing profits by implementing the circular economy

Company	Circular Economy Initiatives	Economic Impact
Philips	"Lighting as a Service" - renting lighting systems instead of selling	Profit margin increased by 15-20% <sup>4</sup>
Renault	Recycling and remanufacturing vehicles at the Flins factory	Savings of 5-10% per vehicle <sup>5</sup>
Nike	"Nike Grind" - using recycled materials in production	Savings of \$20 million annually <sup>6</sup>
Unilever	Recycling and reusing packaging, reducing waste	Increased profitability by 5% <sup>7</sup>

Source: data found in the companies' original sustainability reports mentioned in footnotes.

Applying circular principles can also lead to new business models and opportunities for innovation. Companies that focus on repairing, repurposing and recycling products can create additional sources of income and create new jobs. For example, e-waste recycling businesses create new markets and employment opportunities in green economy sectors.

The social aspects of the circular economy include improving the quality of life through the creation of healthier environments and sustainable communities. Reducing waste and pollution directly affects the health of people and ecosystems, while the economic opportunities resulting from circular activities can contribute to reducing social inequalities and increasing social cohesion.

Finally, the application of the circular economy contributes to achieving the goals of sustainable development (Dovga, 2024). This economic paradigm supports environmental sustainability, economic resilience and social justice, thereby creating an integrated and holistic approach to development.

The results achieved by applying the principles of the circular economy clearly demonstrate its potential to transform our economic systems and create a more sustainable future. Companies, governments and society as a whole must recognize these benefits and work together to implement them to ensure long-term sustainability and prosperity for all.

***Sustainable development as a paradigm of the future***

Sustainable development represents a key paradigm of the future that integrates economic, environmental and social dimensions into a holistic approach to development (Stevović et al. 2017). In a world faced with climate change, depletion of natural resources and growing social inequalities, sustainable development becomes a necessary framework for creating a just and stable global society.

The foundation of sustainable development lies in the concept of meeting the needs of current generations without jeopardizing the ability of future generations to meet their needs (Vann et al, 2024). This principle emphasizes the importance of a balance between three main components: economic growth, environmental sustainability and social inclusion.

4 Philips Sustainability Report, Ellen MacArthur Foundation  
5 Renault Circular Economy Strategy, Ellen MacArthur Foundation  
6 Nike Impact Report, Sustainability Reports  
7 Unilever Sustainable Living Plan, Ellen MacArthur Foundation

Economic growth in the context of sustainable development does not only mean an increase in GDP, but also the creation of economic systems that are resistant to crises and capable of generating well-being for all members of society. Sustainable economic policies promote innovation, support green technologies and stimulate the circular economy, thereby reducing dependence on non-renewable resources and encouraging more efficient use of existing ones. For example, investing in renewable energy sources, such as solar and wind power, not only reduces greenhouse gas emissions, but also creates new jobs and strengthens the energy sector.

Environmental sustainability is the core of sustainable development, focusing on the conservation of natural resources and environmental protection. Climate change, biodiversity loss and pollution require urgent and coordinated action at the global level. By applying the principles of sustainability in all sectors, from agriculture to industry, we can reduce negative impacts on nature. For example, sustainable agriculture uses methods that preserve soil fertility, reduce the use of chemicals, and increase resilience to climate change.

Social inclusion, as the third pillar of sustainable development, includes the fight against poverty, the reduction of social inequalities and the promotion of fairness and equal opportunities for all. Sustainable development means building societies that value human rights, promote gender equality and provide access to basic services such as education, health and clean water. For example, rural development programs can significantly improve the quality of life in underdeveloped areas by providing basic infrastructure and support to local communities.

Sustainable development as a paradigm of the future requires the engagement of all sectors of society: governments, the private sector, civil society and individuals. Through cooperation, innovation and responsible management of resources, it is possible to build a more sustainable world that provides prosperity and quality of life for all.

Ultimately, sustainable development represents the only path to a future in which economic growth, social justice and environmental sustainability support each other and ensure the long-term well-being of the planet and all its inhabitants. By applying the principles of sustainable development, we can create a sustainable and just future for generations to come.

### ***The best practice case studies with applied contemporary management methods***

Contemporary management plays a key role in improving business worldwide, and numerous examples of positive practice prove its effectiveness.

One such example is the company Toyota, known for its “Lean” methodology (Magnani et al, 2024). This approach focuses on waste elimination, continuous process improvement and production optimization. Toyota was able to reduce costs, increase productivity and improve the quality of its vehicles, which set standards in the automotive industry.

Google is another example, with its innovative approach to employee management. Through the “20% Time” program, employees are enabled to devote part of their working time to the development of their own projects. This practice resulted in the creation of numerous successful products such as Gmail and AdSense, encouraging creativity and innovation within the company.



General Electric (GE) has successfully implemented Six Sigma methodology (Escobar et al, 2024) to improve the quality and efficiency of its operations. This approach, which uses statistical tools to identify and eliminate defects, has enabled GE to reduce manufacturing errors, increase customer satisfaction and achieve significant cost savings.

Zara, part of the Inditex group, uses agile methods to quickly adapt to market trends. Their “fast fashion” model enables rapid design, production and distribution of new collections within a few weeks. This agility has allowed Zara to stand out as a leader in the fashion industry, responding quickly to changes in consumer preferences.

These examples show how the application of contemporary management methods can lead to improved operational efficiency, fostering innovation and increasing competitive advantage.

### ***Positive practice of applied circular economy principles***

The circular economy, as a model of sustainable business, is gaining more and more importance around the world. This approach, which emphasizes resource recovery and waste minimization, brings numerous economic, environmental and social benefits. Numerous companies and cities are applying the principles of the circular economy, achieving impressive results and setting standards for sustainable development.

One of the most prominent examples is IKEA, the Swedish furniture giant. IKEA has launched a number of initiatives to promote circularity (Krasnokutskaya and Danko, 2024), including a furniture recycling program where customers can return old pieces of furniture to be processed and reused by the company. In addition, IKEA has introduced products made from recycled materials, thus reducing the need for new raw materials and reducing the environmental footprint. The company is also working to design products that are more durable, easier to repair and reuse.

Patagonia, an American clothing company, is also known for its commitment to the circular economy (Rana, 2024). Through its Worn Wear program, Patagonia encourages customers to repair, recycle and reuse their clothing. The company offers repair services and sales of used products, thereby extending the life of clothing and reducing the need for new production. This initiative not only reduces waste, but also educates consumers about the importance of sustainable behavior.

Renault, a French car manufacturer, has implemented circular principles in its production through the recycling of vehicles and the reuse of parts (Oleśków-Szłapka et al, 2024). Renault has developed a factory specialized in refurbishing used car parts, thus reducing the need for new raw materials and energy. The company also uses recycled materials in the production of new vehicles, which contributes to reducing the environmental footprint and resource efficiency.

The city of Amsterdam is one of the leading examples of the application of the circular economy at the level of urban areas (Thompson et al. 2024). The city has adopted a circular economy strategy that includes projects such as the construction of buildings from recycled materials, energy-efficient infrastructure and waste management systems that maximize recycling. Amsterdam also encourages local businesses and citizens to adopt circular practices through subsidies and educational programs, creating an environmentally conscious and sustainable city.

Philips, a global leader in technology and electronics, focuses on designing products that can be easily disassembled and recycled. The company developed the “Philips Circular Lighting” model (Tayyab et al. 2024), where users do not buy lighting, but pay for the use of light. Philips takes responsibility for the maintenance and recycling of lighting fixtures, which ensures product longevity and minimizes waste. This model not only reduces the environmental footprint, but also allows users to use resources more economically and sustainably.

Unilever, a multinational company in the consumer goods sector, is committed to reducing waste through its “Sustainable Living Plan” program (Arruda Pollice and Scarcelli, 2024). Unilever focuses on recycling packaging, reducing the use of plastic and developing products with a smaller ecological footprint. The company has set ambitious goals for using 100% recycled plastic in packaging and eliminating waste from landfills, thereby significantly contributing to the sustainability of the global supply chain.

These examples show that the application of circular economy principles can bring significant benefits and lay the foundations for a more sustainable world. Through innovative approaches and responsible management of resources, companies and cities can reduce their environmental footprint, increase efficiency and create new economic opportunities. The circular economy is not just a trend, but a necessary step towards preserving the planet and ensuring the long-term well-being of all its inhabitants.

### ***The synergy of contemporary management, circular economy and sustainability***

The synergy of applied contemporary management, circular economy and sustainable development is a powerful tool for creating a sustainable and prosperous society. This integration enables organizations to respond to environmental, economic and social challenges in a holistic manner. Numerous examples from the world demonstrate how the combination of these approaches can bring significant benefits.

Unilever is a company that successfully uses the synergy of these concepts. Through its “Sustainable Living Plan,” Unilever has integrated the principles of the circular economy and sustainable development into all aspects of its business. The company uses contemporary management methods to improve operational efficiency and innovation, while simultaneously reducing its environmental footprint and promoting social inclusion. Unilever is committed to reducing waste, using renewable energy sources and supporting local communities, thus contributing to the global goals of sustainable development.

Patagonia, known for its commitment to sustainability, uses circular principles and contemporary management to create products that have a minimal impact on the environment. Their “Worn Wear” program allows customers to repair and recycle their clothes, extending their life. Patagonia uses contemporary management practices to optimize operations and encourage innovation in product design, resulting in reduced waste and increased environmental awareness among consumers.

Tesla, as a leader in the automotive industry, combines contemporary management, circular economy and sustainable development to transform the way vehicles are produced and used. Tesla uses advanced management methods (Sagar, 2023) to increase production efficiency and accelerate innovation. Through the development

of electric vehicles and solar solutions, Tesla reduces dependence on fossil fuels and promotes sustainable energy. Their products are designed to be durable and recyclable, which further contributes to the circular economy.

Danone, a global leader in the food industry, integrates the principles of sustainable development into its operations through initiatives such as “One Planet. One Health.” Danone uses contemporary management practices (Prasanna et al, 2024) to improve the sustainability of its operations, including reducing carbon dioxide emissions, protecting water resources and supporting regenerative agriculture. The company also applies circular principles through packaging recycling and waste reduction, thus contributing to the preservation of natural resources and the health of the planet.

Schneider Electric, a company specialized in energy efficiency and automation, combines contemporary management with principles of circular economy and sustainable development to provide sustainable solutions to energy challenges. Through advanced technologies and effective management practices, Schneider Electric enables customers to reduce energy consumption and emissions. Their solutions include e-waste recycling and the use of renewable energy sources, thus supporting the circular economy and environmental sustainability.

These examples show how the synergy of contemporary management, circular economy and sustainable development can lead to significant improvements in business performance and sustainability. By combining these approaches, organizations can achieve more efficient use of resources, reduce negative environmental impacts and create value for all stakeholders. Such integration is a key step towards building a more sustainable and just future for all.

### ***Recommendations for further research***

The results of previous research indicate that improvements in the area of the synergy of contemporary management, circular economy and sustainable development can be sought in the following:

**Mechanisms of Implementation:** Effective mechanisms for the implementation of the circular economy and contemporary management practices in various industries need to be explored in depth. This includes identifying key success factors and barriers to overcome.

**Quantification of Benefits:** Research should focus on the quantification of the economic, ecological and social benefits of applying the circular economy and sustainable development. Developing metrics and tools to measure these benefits can help organizations better assess the return on investment of these practices.

**The Role of Technology:** It is necessary to investigate how advanced technologies, such as the Internet of Things (IoT), artificial intelligence (AI) and blockchain, can support the implementation of a circular economy and sustainable management practices. The focus should be on how technology can improve resource tracking, process optimization and transparency.

**Education and Training:** The development of educational programs and training for managers and employees on the principles of circular economy and sustainable development is crucial. Further research should identify the most effective methods for educating and raising awareness of these topics in business schools and within organizations.

**Policies and Regulations:** The research should include an analysis of existing policies and regulatory frameworks that support the circular economy and sustainable development, as well as recommendations for improving those policies. A focus on collaborative approaches between governments, industry and civil society may be of particular importance.

**Practices and Case Studies:** Collecting and analyzing detailed case studies from different sectors and regions can provide valuable insights into best practices and innovative approaches. This can help other organizations to adapt and implement similar strategies in their contexts.

## **Conclusion**

The synergy of contemporary management, circular economy and sustainable development represents a necessary paradigm for building a sustainable and prosperous society in the future. The integration of these holistic approaches enables organizations not only to increase profitability by 5% - 20%, but also to use resources efficiently, reduce the negative impact on the environment and contribute to social inclusion and balance.

Through numerical and descriptive examples from practice, such as Philips, Renault, Nike, Unilever, Patagonia, Tesla, Danone and Schneider Electric, it is clear that the application of these principles brings significant economic, environmental and social benefits. Contemporary management methods, applied in large companies, can decrease for example the defect rate up to 7% in five years.

Circular economy and sustainable development are fundamental components for future sustainable growth and development. Through further research and application of these principles, organizations can achieve significant advances in economic efficiency, environmental sustainability, and social justice. The synergy of these approaches is not only an opportunity, but also an imperative for a global society striving for a sustainable and prosperous future.

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# Information Systems and Socio-Economic Development: Embracing the Future amidst Global Contradictions

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**Abstract:** *In an era characterised by rapid technological advancements and escalating global challenges, the nexus between information systems and socio-economic development emerges as a pivotal arena for future research and strategic endeavours. The future of socio-economic development is shaped by the interplay of various factors, including technological advancements, research, and societal aspirations. In an ever-changing global landscape, where contradictions abound. Understanding these dynamics becomes crucial. Information systems (IS) play a crucial role in facilitating knowledge dissemination, enhancing communication, and enabling data-driven decision-making. Information systems have transformative potential as facilitators of socioeconomic progress, encouraging inclusivity, innovation, and sustainable development. Key areas of research focus include the use of big data analytics for evidence-based policy formulation, the proliferation of digital platforms for inclusive economic participation, and the role of information technology in mitigating environmental degradation. Rapid developments in artificial intelligence, blockchain, and big data analytics are shaping IS. These innovations have the promise of improving efficiency, transparency, and inclusivity in socio-economic systems. Collaborative research efforts across disciplines are essential to address complex global challenges. IS can serve as a bridge between scientific discoveries and practical applications, fostering sustainable development. Society's aspirations drive the adoption and adaptation of IS. Whether it is achieving environmental sustainability, reducing inequality, or promoting digital literacy, IS must align with these aspirations. The world faces paradoxes such as economic growth versus environmental conservation, privacy versus data sharing, and centralised control versus decentralised networks. IS must navigate these contradictions to create a balanced future.*

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**Keywords:** *Information systems, socio-economic development, 3. Big data analytics, Sustainable development, Interdisciplinary research.*

## **Introduction**

The 21st century has ushered in the fourth industrial revolution powered by artificial intelligence in a world fraught with global contradictions (Xing & Marwala, 2017). The outcome of the AI development race will significantly shape the global order, with leading nations poised to reap substantial economic and geopolitical benefits, potentially exacerbating existing tensions (Feijóo et al., 2020). Our world is at a crossroads. Technological advancements are transforming societies at an unprecedented pace, while complex global challenges such as climate change and economic inequality demand innovative solutions. Information systems (IS) have the potential to influence socioeconomic development and therefore break the digital divide (Abdulkareem et al., 2022).

Digital inequalities, characterised by uneven access, utilization, and outcomes of digital technologies, have become a critical societal issue, mirroring and often exacerbating offline disparities rooted in socioeconomic conditions (Vassilakopoulou & Hustad, 2023). While technology can be a catalyst for progress, its impact is fundamentally shaped by human purpose and capacity, making it a magnifier rather than a substitute. (Toyama Kentaro, 2010).

Closing the digital gap is essential to create equitable and prosperous digitalised societies. Amidst these contradictions, information systems (IS) emerge as a powerful force with the potential to shape the future of socioeconomic development. This article explores the intricate relationship between IS, research, and social aspirations, exploring how these elements can be synthesised to create a future characterised by equity, sustainability, and prosperity for all.

## **Information Systems a Catalyst for Progress**

Socioeconomic development encompasses a complex interplay of factors, including advances in technology, research efforts, and the collective aspirations of society (Madon, 2019). Despite concerted national and international initiatives, poverty remains a persistent and growing challenge (Abdulkareem et al., 2022). Overcoming poverty is a prerequisite for achieving the Sustainable Development Goals (SDGs). Poverty eradication is the first and foremost goal among the 17 Sustainable Development Goals (SDGs) adopted by the United Nations. These goals aim to achieve a balance of social, economic, and environmental well-being for all by 2030 (Wei et al., 2023).

The question is whether ICTs can contribute to the fight against poverty as argued by (Toyama Kentaro, 2010) who argues that the successes of ICT for development (ICT4D) are Infrequent and short-lived. The following are some of the reasons for this lack of success: ICT4D projects often disregard local conditions, resulting in technology that is neither culturally appropriate nor practically feasible. (Harris, 2016). Many ICT4D initiatives do not engage with local governments, communities, on the realities of the ground, resulting in irrelevant and unsustainable projects. Furthermore, he emphasises that the impact depends exclusively on the users' purpose

and competence. As a catalyst for social change, technology acts as a multiplier, intensifying both positive and negative effects (Toyama Kentaro, 2010).

Information systems empower progress by facilitating knowledge dissemination, effective communication, and data-informed decision-making. (Hussain et al., 2021). However, the digital divide is profoundly influenced by the underlying political, economic, and social conditions prevalent in low-resource environments (Vasilakopoulou & Hustad, 2023).

### ***Key Research Areas for Inclusive Growth***

Inclusive development is a strategy that focusses on distributing the benefits of growth equitably across society, empowering all individuals to participate fully, regardless of gender, characteristics or other factors (Habib et al., 2024). Countries with insufficient or inequitable availability of ICT face significant obstacles to realise inclusive development goals. A substantial body of evidence supports the link between ICT and inclusive growth. (Habib et al., 2024).

Big Data Analytics for Evidence-Based Policy, Digital Platforms for Economic Participation, and IS for Environmental Sustainability are some of the research areas that hold immense promise for using IS to achieve inclusive socioeconomic development. According to (Ashish Desai, B. Sharlo Sambuddha Goswami, 2022), the exponential growth of data creation and consumption, fuelled by technological advancements, is driving transformative innovation. Data-driven insights are revolutionising decision-making across sectors, op resource allocation, enhancing service delivery, and ultimately drive economic growth. By providing evidence-based intelligence, data is a powerful catalyst for improving social and economic outcomes. While e-Governance has advanced public administration, the potential of big data to accelerate development is immense. To harness this potential, governments must implement appropriate policies and technologies. (Suherlan, 2023).

The international community assesses the progress using indicators derived from available data and methodological advancements.

Accurate and timely data are paramount for effective impact measurement and the achievement of the SDGs. Poor data quality hinders decision making, and the lack of consistent data between countries and timeframes is a significant challenge. To make substantial progress, high-quality comparable data must be readily available. (Nilashi et al., 2023). The proliferation of digital platforms empowers individuals and communities to participate more actively in the economic sphere. E-commerce platforms, for example, create new avenues for entrepreneurship and market access, fostering economic inclusion, particularly in developing regions (Swartz et al., 2023), Information systems offer substantial potential to address environmental issues and promote sustainability. (Charfeddine & Umlai, 2023). By optimising resource allocation, harnessing data for environmental insights and fostering sustainable practices, information systems are instrumental in building a resilient and eco-friendly future. (Kallal et al., 2021).

### ***Technological Advancements Reshaping IS***

Rapid advances in artificial intelligence, blockchain, and big data analytics are fundamentally transforming the landscape of information systems (Mitra et al., 2023). AI-powered systems automate tasks, improve efficiency, and generate valu-



able insights from data, leading to more effective decision making (Alabdulatif et al., 2023). Blockchain technology enhanced transparency and trust in digital transactions, fostering secure and efficient economic activity, particularly for micro-enterprises (Suryavanshi et al., 2023).

Table 1. Technological advancements shaping IS

Technological Advancement	Impact on Information Systems (IS)
Artificial Intelligence (AI) and Machine Learning (ML)	Enables systems to learn from data, make predictions, and automate complex tasks, leading to more efficient and intelligent decision-making processes.
Cloud Computing	Provides scalability, flexibility, and cost savings by allowing data storage and processing on remote servers. Supports hybrid and multicloud environments, enhancing data accessibility and collaboration.
5G Technology	Offers faster data transfer speeds and lower latency, enabling real-time data processing and supporting the growth of Internet of Things (IoT) devices.
Blockchain	Enhances security and transparency with decentralised and tamper-proof ledgers, allowing industries like finance, supply chain, and healthcare.
Augmented Reality (AR) and Virtual Reality (VR)	Create immersive experiences and new ways to interact with data, used in training, simulation, and customer engagement.
Big Data and Analytics	Analyses large volumes of data to gain insight and make informed decisions, with advanced analytics and data visualisation tools helping to understand trends and patterns.

Source: (Suherlan, 2023)

**Interdisciplinary Collaboration: Necessity for Complex Challenges**

The intricate nature of global challenges necessitates a collaborative approach that transcends disciplinary boundaries. Interdisciplinary collaboration has emerged as the cornerstone of contemporary research, allowing scholars to tackle complex challenges that transcend disciplinary boundaries (Ahmed et al., 2024). Fostering collaboration between researchers in IS, economics, sociology, and environmental science is crucial to develop comprehensive and effective solutions. IS can serve as a bridge, translating scientific discoveries into practical applications that drive sustainable development (Li et al., 2023).

Ultimately, the adoption and adaptation of IS are driven by societal aspirations. Whether the aim is environmental sustainability, reduced inequality, or promoting digital literacy for all, IS must be aligned with these aspirations to be truly impactful (Pradhan et al., 2021). It is crucial to ensure that technological advances benefit all members of society, fostering inclusivity and shared prosperity.

**Conclusions: Embracing AI Future**

The 21st century heralds the fourth industrial revolution, marked by rapid technological advancements, particularly in artificial intelligence (AI), which promises to shape future economic and geopolitical landscapes. This era also presents signifi-

cant global challenges, such as climate change and economic inequality. Information systems (IS) have emerged as a powerful tool with the potential to bridge digital divides and foster socioeconomic development. However, digital inequalities persist, often reflecting offline socio-economic disparities. Bridging these divides is essential for sustainable development.

IS acts as a catalyst for progress by facilitating knowledge dissemination, communication, and data-driven decision-making. However, its potential is constrained by the complex interplay of political, economic, and social factors prevalent in low-resource environments. Key research areas such as big data analytics, digital platforms, and IS for environmental sustainability offer significant promise for inclusive growth and development.

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# Challenges and Opportunities for Green Bonds in Bosnia and Herzegovina: A Path Towards Sustainable Finance

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**Abstract:** *Climate change necessitates financing environmentally friendly projects. Green bonds, fixed-income instruments funding sustainable initiatives, are gaining traction. This paper explores green bonds and their potential role in Bosnia and Herzegovina (BiH). The green bond market in BiH is in its nascent stages but exhibits promising signs of growth. Initiatives such as the partnership between the Green Development Fund (GGF) and MF Bank, and European Bank for Reconstruction and Development (EBRD) initiatives such as the Green Finance Facility (GEFF) are positive steps towards fostering a robust green bond market in the country. However, challenges remain, including the lack of well-defined standards and the limited experience of issuers and financial institutions in the field. Despite these challenges, the regulatory framework for green bonds is gaining traction, both internationally and nationally. International standards such as the Green Bond Principles (GBP) developed by the International Capital Markets Association (ICMA) provide guidelines for the issuance, management, and reporting of green bonds. Additionally, national regulatory frameworks, such as the EU Guidelines for Green Bonds, complement these international standards. Adherence to these regulatory frameworks is crucial for ensuring transparency, integrity, and accountability in the green bond market, thereby fostering investor confidence and promoting sustainable development. The Green Bond Initiative, launched by the International Bank for Reconstruction and Development (IBRD), serves as an example of initiatives that support countries and issuers in developing their green bond markets. As the demand for sustainable investments continues to rise, the green bond market in BiH is poised for growth. By addressing the existing challenges and embracing international best practices, BiH can effectively harness the potential of green bonds to finance sustainable projects and contribute to a greener economy.*

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**Keywords:** *Green bonds, Sustainable finance, Regulatory framework, Green Bond Principles*

## Introduction

The accelerating impacts of climate change pose an existential threat to humanity. Accordingly, financing environmentally friendly projects such as renewable energy utilization, carbon dioxide emission reduction, and nature remediation is becoming a global imperative. Since 1880, six warmest years have been recorded after 2010 (National Centers for Environmental, 2017). We are witnessing accelerated melting of glaciers, rapid temperature rise, water acidity and sea levels, while droughts and floods have become more frequent phenomena. Significant financial investments are needed to slow down these changes. Estimates indicate that keeping global temperature below the Paris Agreement threshold, which aims to limit warming to 2°C, would require investments of up to \$12 trillion by 2050 (Baker et al., 2018).

Bonds are debt securities that represent a loan made by investors to the issuer. The issuer undertakes to repay the loan's principal increased by interest to the investors at a predetermined time. Bonds are considered a relatively safe investment as they are usually secured by the issuer's assets or revenues. In developed capital markets, bond issuance is a common and efficient way to finance investment projects. This process requires detailed planning and preparation, including complex calculations (Grujić, 2016b). Before seeking project financing sources, it is necessary to compare different projects and select the one with the greatest potential. Then, it is necessary to conduct a detailed project analysis and assess its profitability. The next step is to define the financing structure, including the amount of funds needed, the repayment period and the interest rate (Grujić, 2012). After that, the prospectus for the issuance of bonds is prepared, which contains all relevant information about the project and the issuer. Once all these actions have been taken, the issuer can issue bonds on the capital market.

The advantage of financing projects through bond issuance is the fact that a large amount of money can be raised from a large number of investors. In addition, bond issues are characterized by long repayment periods, which allows for the financing of long-term projects (Grujić, 2016b).

Green bonds are instrumental in transitioning to a more sustainable and low-carbon economy (Sartzetakis, 2021). In the context of efforts to combat climate change, green bonds have emerged as an effective tool for financing environmental projects. These bonds are fixed-income debt instruments aimed at supporting investments in sustainable agriculture and forestry, renewable energy sources, clean transportation, energy efficiency and biodiversity (Baker et al., 2022). The European Investment Bank (EIB) is a pioneer in this field, as it issued the first green bond in 2007 (World Bank, 2019). Following the successful venture, different types of green bonds have emerged, including corporate, sovereign, municipal and others. Other supranational institutions have also followed suit, with the International Finance Corporation issuing the first \$1 billion green bond in 2013 (Baker et al., 2022).

The experts and wider public are interested in the differences between green bonds and climate bonds, the motives and risks of investing in green bonds, and the advantages and disadvantages of investing in green bonds. In this regard, this

chapter will answer these questions, but will also point out the differences between the types of green bonds. In addition, it will show how the “greenness” of a green bond is assessed, what a “green premium” is, and whether there is evidence of its existence. It will also show the key elements of the regulatory framework for green bonds, some of the key initiatives and standards related to green bonds, and how investing in green bonds can contribute to sustainable development.

## **Literature Review**

Green bonds are a type of bond issued with the aim of financing projects and initiatives that contribute to environmental sustainability and climate change mitigation (Flammer 2021). Governments, international institutions, corporations, and financial organizations can issue these bonds. Investors in green bonds, in addition to the expected financial return, often also want to contribute to achieving sustainable goals.

It is important to distinguish green and climate bonds (Bhutta et al., 2022). Climate bonds focus exclusively on projects and initiatives aimed at addressing climate challenges, such as reducing greenhouse gas emissions, adapting to climate change, and protecting ecosystems affected by climate change.

Green and climate bonds undergo independent certification to confirm that the funds raised are used for projects in line with environmental and climate goals (Rose, 2019). Green bonds have evolved into a standardized financial instrument, and green bond issuers adhere to established standards and guidelines to ensure transparency, build investor confidence, and facilitate comparison. These guidelines clearly define what constitutes a “green” investment and ensure that the funds raised are invested in projects that have positive environmental impacts.

In principle, green bonds are most often purchased by large institutional investors, but governments, central banks, and individuals can also invest in them. Projects financed through the issuance of green bonds are most often directed towards renewable energy sources, increasing energy efficiency, and low-emission vehicles.

The concept of green finance encompasses regulatory frameworks, such as tax incentives for green investments, investment policies, institutional arrangements, and financial infrastructure that encourage the issuance of green bonds (Wang and Zhi, 2016). The goal is to direct the funds raised towards environmentally responsible projects and activities, thereby contributing to the protection of the environment and the sustainability of resources (Wang and Zhi, 2016; Mihelja and Tica, 2021).

Four basic types of green bonds are distinguished (Mihelja and Tica, 2021): standard green use of proceeds bonds, green revenue bonds, green project bonds and green securitized securitised bonds. A standard green bond is a bond with an obligation to pay interest and principal on the debt in accordance with the principles of green bonds. In this case, the payment of obligations on issued bonds is secured by the business or business results of the issuer (Weber and Saravade, 2019). A green revenue bond does not include an obligation to pay interest and principal in the same way as the model described above. For these bonds, the credit exposure of the bonds is linked to revenue flows, fees, and taxes. A green project bond is a bond issued for one or more green projects in which the investor is directly exposed to project risk with or without potential recourse against the bond issuer (Kaminker, 2015).

ICMA (2018) defines the verification process as an individual assessment of whether a green bond is in accordance with the established criteria and the issuer's business. Rating agencies are interested in the compliance of green bonds with ESG (environmental, social, and governance) criteria, which assess a company's performance in these areas, on the basis of which they will assign a credit rating or an assessment that is a valid indicator of a company's green business. These activities are developing more seriously, as evidenced by the fact that existing credit rating agencies such as Moody's and S&P are developing their own classification frameworks in this domain (Suk et al., 2019).

As the green bond market and green bonds have developed, so-called "nuanced" green projects and "nuanced" green bonds have also emerged. By using the methodology for determining the "nuance" of green bonds, all interested parties are offered transparent information on the degree of compliance of green bonds with low carbon monoxide emission levels in the future (Pauleit et al., 2017). As the green bond market and green bonds have developed, so-called 'nuanced' green projects and bonds have emerged. Based on the foregoing, 'shades' and types of green projects have been developed (Table 1), which categorizes projects based on their level of contribution to carbon reduction, from dark green (high impact) to light green (lower impact).

**Table 1.** "Shades", descriptions and examples of projects

"Nuance" and Project Type	Project Example
Dark green is awarded to projects that align with a long-term vision of a low-carbon future.	Wind power projects with a management structure that includes environmental stewardship.
Medium green is awarded to projects that represent a step towards a long-term vision but the technology they use is not yet sufficiently developed to achieve the long-term vision.	Bridging technologies such as hybrid buses.
Light green is awarded to projects and solutions that are climate-friendly but do not contribute to the long-term vision. Such projects do not represent necessary and potentially significant short-term emissions reductions, but such projects need to be carefully managed to avoid extending the life of equipment that may contain fossil fuel elements. Projects may be exposed to physical and transitional climate risk without adequate strategies to ensure protection.	Investments that increase the efficiency of fossil fuel infrastructure, when clean alternatives are not available, thereby reducing the level of cumulative emissions.

Source: Alfsen et al., 2018

With the growing demand for ESG investing and its key role in a sustainable future, incorporating different asset classes, including ESG bonds, can reduce overall risk without significantly reducing returns (Bruno et al., 2022). The pronounced volatility of financial markets poses a significant challenge for institutional investors, especially insurance companies, as they have investment restrictions. In periods of market instability, the need for risk mitigation strategies becomes crucial. Investors are increasingly seeking alternatives to traditional investments to diversify their portfolios and improve risk management. By investing in green bonds, investors can

align their portfolios with their values and contribute to a more sustainable future (Marín-Rodríguez et al., 2023).

ESG bonds offer investors the opportunity to invest in projects that are sustainable and have a positive impact on the environment and society. This gives them not only a financial, but also an ethical and social return on investment (Bahra and Thukral, 2020). Including ESG bonds in portfolios can help mitigate volatility risk (Xu et al., 2022). These assets tend to be less correlated with traditional financial instruments, which means they can stabilize a portfolio in times of market instability (Grujić, 2023). ESG bonds are a type of bond issued by companies and organizations that adhere to certain environmental, social, and governance (ESG) standards. These bonds are becoming increasingly popular among investors who want to align their investments with ESG values (Järvinen, 2022).

ESG bonds can improve long-term portfolio returns. Research shows that these bonds have outperformed traditional bonds on average over the long term (Henriksson et al., 2019; Zhang et al., 2022). Investing in ESG bonds can contribute to improving the image of an insurance company, which can attract new customers (Bressan, 2023), enhance reputation (Li et al., 2023; Su et al., 2023; Wan 2023), and strengthen the company's long-term sustainability (Ioannou and Serafeim, 2015; Braun and Friede 2017). In short, reputable authors have shown that ESG bonds offer a range of benefits for investors, insurance companies, pension funds, and society as a whole (Nguyen et al., 2023).

The literature presents various findings on the existence and magnitude of the green premium, i.e., the difference in yield between green and conventional bonds. Depending on factors such as credit rating, currency, sector, certification, and bond issuance time, the green premium can be positive, negative, or zero. Some researchers have found that green bonds have a lower yield than conventional bonds, indicating the existence of a negative green premium or yield discount. This means that investors pay a higher price for green bonds compared to conventional bonds of the same issuer, maturity, and credit rating. A negative green premium may be the result of higher demand for green bonds from socially responsible investors or lower risk associated with green projects. For example, Sharfman and Fernando (2008) and Ghoul, Guedhami, Kwok, and Mishra (2011) found that established environmental risk management results in lower capital costs and a shift from equity financing to debt financing, which is often accompanied by greater tax breaks.

Löffler, Petreski, and Stephan (2021) investigated whether there is a premium for green bonds, called "greenium," in the primary and secondary bond markets. Using a sample of around 2,000 green and 180,000 non-green bonds from 650 international issuers, the authors aim to identify the most similar sample of conventional bonds to the sample of green bonds. The results show that green bonds have a larger issue size and lower-rated issuers, on average, compared to conventional bonds. Estimates show that the yield for green bonds is, on average, 15-20 basis points lower than for conventional bonds, both in the primary and secondary markets, indicating the existence of a "greenium."

Hachenberg and Schiereck (2018) investigated whether there are price differences, i.e., yield differences, between green and conventional bonds on the secondary market in the United States (US) from 2013 to 2017. The authors use a matching method to find similar non-green bonds for a sample of 108 green bonds. The results



show that green bonds, on average, trade 1.18 basis points lower than non-green bonds of the same maturity during the observation period. However, AAA-rated green bonds trade at a 0.45 basis point higher yield.

### **Controversies Surrounding the “Green Premium”**

The research on the green premium presents a complex and nuanced picture. While some studies indicate a positive premium, others suggest a negative or even nonexistent premium. This inconsistency highlights the challenges in accurately measuring the impact of green attributes on bond pricing. Dorfleitner, Utz and Zhang (2021) investigate the impact of the “greenness” of bonds on their prices. The authors define the “green premium” as the difference between the yields of matched conventional and green-labeled bonds. On average, green bonds have a statistically significant positive premium. This premium increases with external greenness evaluations, i.e., investors accept premiums of up to five basis points for bonds with a substantial environmental agenda. This external validation effect may offset the lack of payment for information costs, as this effect decreases with the increasing age of the bonds.

Gianfrate and Peri (2019) identified a statistically significant average negative green premium for issued green bonds of approximately 18 basis points. Zerbib (2019) found a low negative green premium of two basis points. Bachelet, Becchetti and Manfredonia (2019) found that institutional green bonds had a negative yield premium, while corporate bonds had a positive premium compared to non-green bonds, unless the corporation certified the green bond. Analyzing a sample of 89 bond pairs (green and regular bonds), they found that green bonds have higher yields and liquidity while being less volatile than their closest non-green bonds. Similarly, Hyun, Park and Tian (2019) found that externally certified green bonds have a negative green premium of around six basis points. Furthermore, green bonds certified by the Climate Bonds Initiative (CBI) had a yield discount of approximately 15 basis points. Baker, Bergstresser, Serafeim and Wurgler (2018) found that after-tax yields on green bonds at issuance were approximately six basis points below equivalent yields on regular bonds. The yield discount increased following external certification and registration with the CBI. Analyzing panel data, Fatica, Panzica and Rancan (2021) found a negative green premium for green bonds of supranational issuers and green corporate bonds. Bour (2019) found evidence of a yield discount for green bonds. The price premium varied depending on the rating, currency denomination and issuer sector. However, other researchers have not found valid evidence of a yield discount on green bonds (negative green premium). In our region, Janković et al., (2022) have dealt with this topic. They found a significant positive correlation between the yields of green and conventional municipal bonds and confirmed that green municipal bonds on average generate a slightly lower yield compared to similar conventional bonds, but did not confirm the existence of a statistically significant yield discount, i.e. a price premium for green bonds. Partridge and Medda (2020) did not find a strong argument for the existence of a negative green premium on the primary market. Furthermore, Larcker and Watts (2020), when comparing municipal green bonds to equivalent conventional municipal bonds, found a very small yield discount, with no evidence to support a negative premium on municipal green bonds. They thus concluded that the green premium is *de facto* zero. On

a large sample of municipalities in the US, Karpf and Mandel (2018) investigated US municipal green bonds and found price discounts on the secondary market. In recent years, however, the quality of municipal green bonds is considered to have improved and the premium for some of them has become positive.

On the other hand, some researchers have found that green bonds have a higher yield than conventional bonds, indicating the existence of a positive green premium or risk premium. This means that investors require higher compensation for investing in green bonds compared to conventional bonds of the same issuer, maturity and credit rating. The positive green premium may be the result of a lower supply of green bonds from issuers or higher risk associated with the uncertainty surrounding the definition, standards and impact of green projects. For example, Tang and Zhang (2020) found a favorable stock price reaction to green bond issuance. However, they did not identify a consistently significant positive green premium, concluding that stock price behavior following green bond announcements is not entirely driven by lower debt costs.

Several factors could contribute to the varying findings on the green premium. These factors are methodological differences, market conditions, bond characteristics, and data availability and quality. For example, studies may employ different methodologies, sample sizes, and statistical techniques, leading to divergent results. Second, the green bond market is relatively young and dynamic, with evolving investor preferences and regulatory environments that can influence bond pricing. Third, differences in bond maturity, issuer type, credit rating, and other characteristics can impact the green premium. In the end, variations in data quality and accessibility can affect the accuracy of research findings.

### **Motives, Goals and Risks of Investing in Green Bonds**

The motivations for investing in green bonds are multifaceted and encompass both financial and non-financial aspects. Financial Motivations are portfolio diversification, reduced risk and competitive yields (Sangiorgi and Sangiorgi, 2021).

Green bonds offer portfolio diversification as they are often less correlated with traditional market instruments such as stocks and bonds. This means they can provide additional protection during times of market volatility. Green bonds are often considered less risky than traditional bonds as they are frequently backed by government guarantees or other entities, making them attractive to investors seeking to reduce risk in their portfolios. Interest rates on green bonds can be competitive with those of traditional bonds, and sometimes even higher (Sangiorgi and Sangiorgi, 2021).

Many investors have motivations beyond financial returns and desire to invest in sustainable projects and contribute to a positive environmental impact. Green bonds offer them a way to do so as they finance projects that promote renewable energy sources, energy efficiency, and environmental protection (Tolliver et al., 2019).

By investing in green bonds, institutional investors can enhance their image and attract investors interested in sustainability. Additionally, they can contribute to achieving sustainable development goals, such as combating climate change and protecting biodiversity.

ESG bonds carry various risks, both common and specific (Belloni et al., 2020; Duque-Grisales and Aguilera-Caracuel, 2021).

Common Risks are credit risk, reputational risk, liquidity risk and interest rate risk. On the other hand, specific risks are project risk, regulatory change risk, knowledge gap and potential for “greenwashing” (Lin & Hong, 2022).

Project Risk means the lack of data on green bonds makes it challenging to assess credit risk, and projects financed by green bonds may be risky and not generate expected returns (Bressan 2023).

Reputational Risk is the issuer’s integrity may be questioned, affecting its reputation and increasing borrowing costs or jeopardizing repayment.

Greenwashing refers to the practice of using “green” marketing and PR activities to promote an organization as environmentally conscious and socially responsible, even if it is not. To mitigate concerns arising from the prevalence of greenwashing and investor deception in the green bond market, self-regulatory measures have been established, including guidelines, recommendations, guides, and best practice standards (Grujić, 2023). It is important to address “greenwashing” as a form of marketing manipulation used by companies, organizations, or institutions to portray themselves as environmentally responsible and sustainable, even if they are not in reality. The goal is to attract consumers and investors willing to pay more for products or services they believe are environmentally friendly. Some of the most common methods include:

The ESG bond market is relatively new and less liquid than traditional bond markets. Interest Rate Risk: As with traditional bonds, changes in interest rates can affect the price of these bonds (Nguyen et al., 2023).

### **Regulatory Frameworks for Green Bonds**

Despite their growing popularity, green bonds still face challenges such as the risk of greenwashing and the need for more robust standards (Baldi & Pandimiglio, 2022). The green bond market in Bosnia and Herzegovina (BiH) is at an early stage of development, but shows promising signs of growth. There are initiatives, such as the partnership between the Green Development Fund (GGF) and the MF Bank, and European Bank for Reconstruction and Development (EBRD) initiatives such as the Green Finance Facility (GEFF), which are positive steps. However, challenges remain. There is a lack of clear standards and issuers and financial institutions do not have much experience. However, even though our market lags behind, it shares the characteristics of all markets. Namely, the regulatory framework for green bonds refers only to the standards and guidelines that define what qualifies as a “green” investment and how the issuance of green bonds should be structured and monitored. There are international standards such as the Common Framework for Green Bonds (Green Bond Principles) developed by the International Capital Markets Association (ICMA). These principles serve as guidelines for the issuance, management and reporting of green bonds. At the same time, there are regulatory frameworks at the national level that regulate the issuance of green bonds in certain countries. Given the growing interest in investments in sustainability and the green economy, regulatory frameworks for green bonds are becoming increasingly important to ensure transparency, integrity and accountability in this sector. Investors and issuers dealing with green bonds should adhere to these regulatory guidelines to ensure confidence and transparency in the green bond market.

Apart from a common framework for green bonds globally, there are several key elements of the regulatory framework for green bonds. For example, the International Development Finance Corporation (IFC) Green Bond Guidelines. These guidelines offer a more detailed framework for defining green projects and monitoring green bonds. Furthermore, there are also Guidelines for Green Bonds of the European Union. Namely, the EU has developed its guidelines for green bonds to facilitate the issuance and investment in green bonds within the bloc. At the same time, many countries have their regulatory frameworks for green bonds, which may be based on ICMA principles or other international standards. Apart from these frameworks, some numerous other initiatives and standards contribute to the global regulatory framework for green bonds such as the Green Bond Initiative. This initiative, launched by the International Bank for Reconstruction and Development (of the World Bank Group), offers support to countries and issuers in the development of the green bond market.

## **Conclusion**

Green bonds represent an important instrument in the fight against climate change and the promotion of sustainable development. Their growing popularity and availability offer significant potential for financing environmental projects and mitigating the negative effects of climate change. A thriving green bond market in Bosnia and Herzegovina has the potential to attract billions of dollars in investment, creating thousands of green jobs and contributing significantly to the country's GDP. Policymakers in Bosnia and Herzegovina can play a crucial role in fostering a thriving green bond market by creating favorable regulatory environments, providing incentives for green investments, and raising awareness among investors and issuers.

One of the key challenges is the lack of generally accepted standards for green bonds, which can lead to reputational risk if the green integrity of the issuer is questioned. This highlights the need for clearer and stricter regulation to ensure the credibility of green bonds and investor confidence. In this regard, further research should focus on the long-term analysis of the performance of these bonds in different economic cycles, as well as on the development of more detailed and precise models for the evaluation of risks and returns, taking into account the specificities of green financial instruments.

Green bonds have great potential to support sustainable development and the fight against climate change. They allow investments to flow into green projects, increasing the total financial resources available to combat climate change and promote sustainable development. They offer investors the opportunity to include green investments in their portfolio and improve its overall sustainability. More importantly, green bonds require issuers to transparently report the use of funds raised by the green bond, thus strengthening green integrity and increasing accountability. Issuance of green bonds is an excellent option for both companies and investors. Businesses and governments can use them to finance green projects, while at the same time improving their image and attracting new investments. In time, we can also expect government green bonds as BiH aligns its financial system with global trends. On the other hand, investors can invest in projects that are good for the planet and make a profit at the same time. Green bonds have significant potential to help combat climate change and promote sustainable development.

Different investors, including individuals and institutions, can contribute to the growth of the green bond market.

Individuals can contribute through direct investment in green bonds issued by governments, municipalities, or corporations. They can also participate through indirect investment via mutual funds, ETFs, or pension plans that offer green bond options. Furthermore, individuals can advocate for increased green bond offerings by financial institutions and support policies promoting the green bond market.

Institutions, such as banks, insurance companies, and pension funds, can drive market growth by investing in green bonds, developing innovative green bond products, and providing advisory services to issuers and investors. By allocating a portion of their portfolios to green bonds and creating new financial instruments tailored to sustainable investments, institutions can meet the growing demand for green financial products.

Countries like Bosnia and Herzegovina can overcome challenges in developing green bond markets by establishing clear regulatory frameworks, cultivating a pipeline of green projects, building institutional capacity, raising public awareness, and fostering collaborations with international institutions.

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# Log Cabin Churches as Authentic Representatives of Cultural and Historical Heritage

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**Abstract:** *Pilgrimage trips, on the one hand, provide a valuable contribution to the development of all tourism in the modern world, especially because the pilgrimage to holy sites in the past was the foundation of modern tourism, or at least the earliest form of travel. The significance of the developing of religious tourism lies in the fact that more detailed, more complex, and fundamental potentials are presented and offered to the modern tourist market as well as to the pilgrims themselves. These potentials include the already existing offerings within the Serbian Orthodox Church (SOC) and is based on the opening and inclusion individual parts of the product, which in this case make up the insufficiently explored and represented log church. Log cabin churches stand out as a particular type of temple. These specific cultural monuments belong to the folk creativity of mostly nameless, self-taught gifted builders and unschooled artists. The name itself indicates that it is a special form of a place of worship made of high-quality wood. In the professional terminology of cultural and historical values, they bear such a name as houses built of wood are called log cabins. It seems that Jovan Cvijić popularized the term at the beginning of the 20th century. In order for the final users to learn about the offerings and services of the entire religious tourism in Republic of Srpska (RS) / Bosnia and Herzegovina, the assistance of the media and public relations is necessary. The aim of this paper is to demonstrate that the religious tourism sector is not sufficiently represented to the wide tourist market and to the believers themselves, and that it is necessary to communicate through the media and in other ways about the value and importance of religious tourism and its affirmation.*

**Keywords:** *religious tourism, media, log cabin churches, pilgrimages*

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## **Research Subject, Importance of the Topic and Research Aims and Hypotheses**

The topic represents a significant research framework encompassing key aspects of the development of religious tourism in Bosnia and Herzegovina, marketing, and the promotion of religious sites—in this case, log churches—and the entire tangible and intangible heritage of these areas. Religious tourism, as a specific segment of the tourism industry, has significant potential to contribute to the preservation of cultural and religious heritage, as well as the economic revitalization of local communities, but certainly also Bosnia and Herzegovina as a whole.

The subject of this research is focused on analyzing the current theory and practice of religious tourism development in Bosnia and Herzegovina through the examination of log churches, with particular emphasis on the marketing strategies used to promote religious destinations. Marketing, as a key tool for promoting religious tourism, plays a crucial role in the development and enhancement of religious destinations. The effective use of digital channels, social media, SEO strategies, the organization of religious events and pilgrimages, as well as the branding of log churches and the entire intangible heritage, can significantly contribute to increasing the number of visitors and raising recognition. The aim of this paper is to contribute to understanding this dynamic topic and offer practical guidelines for improving the religious tourism sector, through the application of modern marketing strategies, in order to achieve greater tourism potential and improve the position of tangible and intangible cultural heritage, log churches, and other religious sites, on the maps of religious pilgrimages and tourist destinations in BiH and beyond.

The importance of this topic lies primarily in its significant potential for the development of tourism and the preservation of cultural and religious heritage in Bosnia and Herzegovina. Religious tourism in BiH, with an emphasis on log churches, represents an important link in preserving historical, cultural, and spiritual values, while also having economic potential through attracting pilgrims and tourists. Successful cooperation among all relevant stakeholders in religious tourism and effective marketing communication with the environment is very important not only for the success of the aforementioned organizations but also for the success of companies related to tourism, religious organizations, and thus for the national economy and society as a whole. The development of interreligious cooperation and religious tolerance is a key moment in this work.

The goal of this paper is to demonstrate that religious tourism represents a rich and underutilized resource for both the state of Bosnia and Herzegovina and individual religious structures in these areas. Bosnia and Herzegovina is rich in cultural, religious, and historical resources that represent potential, which could elevate religious tourism as a dominant factor in the development of overall tourism. Mutual cooperation and connection, overcoming historical disagreements and war actions in this area, will contribute to the affirmation of religious tourism and historical and cultural values.

Several hypotheses can be posed regarding the topic of tourism development, religious and pilgrimage tourism, adequate presentation, project financing, and multi-project management in tourism organizations in Bosnia and Herzegovina. The most important ones for this paper are as follows:

H1: The development of religious tourism represents a resource that is under-utilized in BiH, and its benefits can contribute to the economic development of the state and local communities, as well as the religious communities in BiH.

H2: The model for utilizing religious and cultural-historical landmarks in Bosnia and Herzegovina in the field of religious tourism and pilgrimage needs improvement to align with, or come closer to, global standards, thus contributing to greater productivity.

H3: Log churches are a potential that requires work, with particular emphasis on the marketing strategies used to promote religious destinations. Marketing, as a key tool for promoting religious tourism, plays a crucial role in the development and enhancement of religious destinations.

## **Research Methods**

Data were collected through the analysis of primary and secondary sources. According to the problem, subject, and objectives of the research, the following methods were used during the research and writing of the paper:

1. **Inductive and Deductive Methods** – used to draw conclusions on how the implementation of digital marketing can influence the development of religious tourism and marketing in BiH.
2. **Analysis Method** – represents the process of breaking down the whole into smaller, simpler elements, and involves studying and analyzing each part individually.
3. **Descriptive Method** – used to describe the emergence of religious tourism, various theoretical frameworks, activities it encompasses, and to compare different approaches in marketing models.

The log cabin churches themselves bear witness to history, the past, have inestimable religious and cultural value and represent a potential that can be used for the development of religious tourism with all the elements and forms of activity that this type of tourism entails (cultural visits, religious visits, part of pilgrimage routes). To that end, it is necessary to look at all the neophonic elements of their existence, the opportunities they provide, but also the motives that prevail among visitors. Pilgrimage trips, on the one hand, provide a valuable contribution to the development of the entire tourism in the modern world, especially because the pilgrimage to holy sites in the past is the foundation of modern tourism, or at least the oldest form of travel.

The importance of the research is to include more, more detailed, more complex and thorough log cabin churches with the already existing offer within the Serbian Orthodox Church (SPC) in the very offer of religious tourism and pilgrimage, and based on the opening and inclusion of individual parts of the product that in this case make these our sanctuaries from ancient times. Religious tourism and pilgrimages have existed for centuries in the Serbian Orthodox Church, but due to various historical circumstances and difficulties, this topic was not given the necessary space so that the offer of the rich cultural and historical heritage could be presented to the wider masses and to all those who would be potential visitors.

Such research contributes to a more detailed analysis and overview of the general picture of this type of tourism within the Orthodox religion and the Orthodox

world. Consequently, this work tries to establish the basic potential of this unused religious and cultural heritage and to develop the need for a tour among existing visitors, who can be classified into several categories, with the aim of considering the possibilities for a more intense promotion of religious tourism and pilgrimage in the tourist offer Republic of Srpska, Bosnia and Herzegovina.

### **Log cabin churches and thie significance**

Religious tourism is in the midst of its expansion both in the field of supply worldwide and certainly also in terms of its demand as a finished product. The log cabin churches were chosen for analysis because they represent the cultural and religious heritage of the Serbian Orthodox Church - Eparchy of Banja Luka and other dioceses on the territory of BiH as a strategic place for preserving the identity of the Serbian people in these areas. A large number of faithful people, spiritual significance in history, geographical location contribute to the reasons for selection and research. Speaking about the reasons for the pilgrimage, Professor Čomić states that some of them can be categorized as: free means, free time, level of education, profession, age structure, dense population, quality of the environment, tourist propaganda, wealth of offers, the development of traffic, the price of services, while specific offers, interests, and emotions of each individual, which are always related to external factors and stimuli, are cited as subjective factors (Čomić, 1990)

McIntosh (2019.) n the other hand, talks about the motives of travel, classifying them in the following ways: "physical relaxation, rest, sports activities and specific medical treatment".

Cultural motives that are related to the individual's desire to travel in order to get to know other countries, their peoples and cultural heritage, expressed through art, music, literature, folklore, cultural and historical monuments, etc. Interpersonal motives related to the desire to visit relatives or friends or even to escape from monotonous everyday life. Krippendorf gives the following list of motives: compensation, escape, communication, expansion of horizons, freedom and self-affirmation, discovery and experience of oneself.

It is undeniable that there are different conceptions and theories of the concept of the motivation of pilgrim tourists, and it can be concluded that it is impossible to give a general agreement when it comes to motives. Christianity, on the other hand, when it talks about the journey of believers to holy places, does not engage in research into the motivation for the journey of believers, because every Christian is unique and unrepeatable. Everything happens according to God's providence, a phenomenon that is present everywhere except in theories as we see in psychology. Psychology places human judgment of its scientific definition above God. In faith, it is completely different, God's providence is above everything and guides man through life, of course, with respect for man's freedom. The relationship between God and each person is a personal relationship that is a secret in faith (Krippendorf, 1986.)

Status or prestige motives identified with needs for personal self-esteem and development, they have become associated with travel, work and professional interests for the purpose of education and the pursuit of hobbies. (Mackintosh, 1986). Harry Robinson lists the following motivations as stimulating for undertaking activities: relaxation, health reasons, sports activities, enjoyment, fun, excitement, curiosity, interpersonal reasons, professional reasons, spiritual reasons, while he also

lists disincentive motives: costs, lack time, physical limitations - illnesses, family reasons, lack of interest, psychological barriers. (Harry, 1976). H. Thomas cites the following motives: educational cultural motives, relaxation and health, ethical motives and others (by others he means climatic weather conditions, health, economic reasons, adventure, development of one's own personality, participation in history... (Thomas, 1964).

Based on motivations, they can be distinguished:

- tourists, who travel to satisfy religious needs
- visitors who expect practical effects from visiting sacred objects or holy persons
- visitors for whom participation in religious ceremonies is a form of spiritual fulfillment
- tourists who want to get to know the holy places of their confessional and national communities directly, who are searching for their roots
- tourists who, during a visit to religious facilities or religious ceremonies, combine vacation, getting to know something new (Bjeljac, 2006).

There are various factors and motives that influence tourist travel. When it comes to religious tourism, religious tourism, devotional travel, pilgrimage, these motives differ in relation to other types of travel.

The author's personal experience, immortalized through decades of pastoral and educational work, has shown that a large percentage of all those who come have certain emotional, spiritual, or similar expectations. The reasons are delicate and differ from person to person, just as man himself as a unique and unrepeatable being is a separate and unrepeatable monad. No matter how much you look at them and research them, the motives and reasons for the visit intertwine with each other, they are similar. For example, in a survey conducted on more than six hundred respondents for the reasons and motivations for visiting the three great sanctuaries of the global level, Jerusalem in Israel, Fatima in Portugal and Santiago de Compostela in Spain, the results show the existence of a multidimensional scale that includes three dimensions of motivation for visiting holy places as tourist destinations.

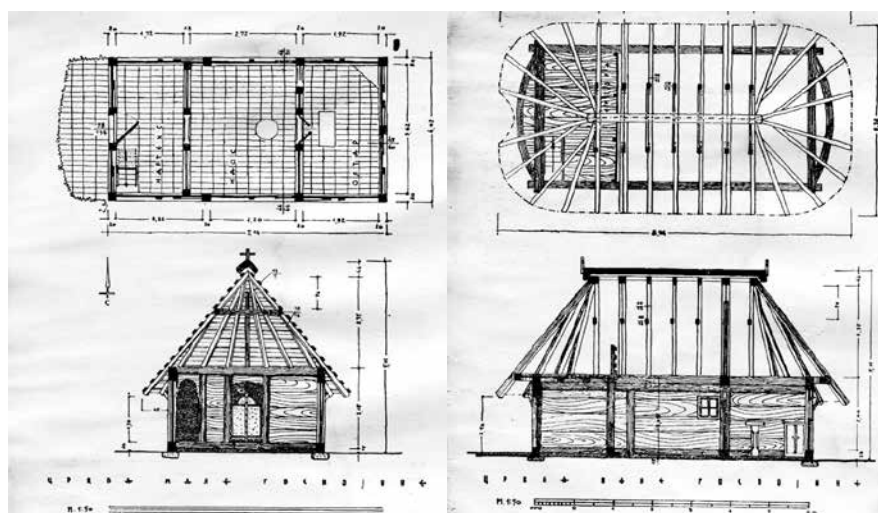
The historical and cultural heritage of the Serbian people in the territory of Bosnia and Herzegovina is rich and represents a solid foundation for international presentation in all its spheres. In the expansion of tourist demand, the areas of Bosnia and Herzegovina have much to offer.

The Republic of Srpska itself has a need for the development of the tourist offer and quality design and work on it in order to offer its potential and qualities in the best way to the modern tourist market. Only the intangible cultural heritage of these areas represents a special resource that should be researched separately because it represents a hidden potential that will only be discussed in the future. Churches built from natural materials, log cabins represent one of many pearls. Log churches were created as one of the forms of folk architecture, as a result of the fact that during the Ottoman period it was forbidden to build monumental buildings from solid materials, and the people, adapting to the new circumstances, tried to build modest buildings where people could pray and perform all those actions necessary for their religious needs. They were built with wood from the immediate surroundings, and were easily and quickly assembled as a whole. Not infrequently, they were put to-

gether without a single nail with the brilliant craftsmanship of excellent craftsmen of the time in which they were created. They are the works of self-taught masters whose names are unknown. They are mostly without graceful stylistic elements and decorations, they were built in hidden places in the depths of the forest, far from the gaze of passers-by and everyday life. In this work, we will stick to Petar Momirović's division - according to which log cabin churches can be typologically divided into four groups:

1. An older, simpler type, created as a work of folk architecture (like the church in Malo Blaško near Banja Luka, from the mid-18th century),
2. The younger, more developed type, created as a work of craft construction (like the log cabin in Jelička near Prijedor from the first half of the 19th century),
3. Transitional type, with an added three-sided apse and new structural and decorative elements (like the log cabin church in Kolima near Banja Luka, from the 18th century)
4. A new type of log cabin, with a more developed base and more perfect finishing (like the church in Marička near Prijedor from the 19th century (Momirović,1956).

**Figure 1.** *Malo Blaško, construction of the log cabin church, ing. E Dimitrijević, 1952*

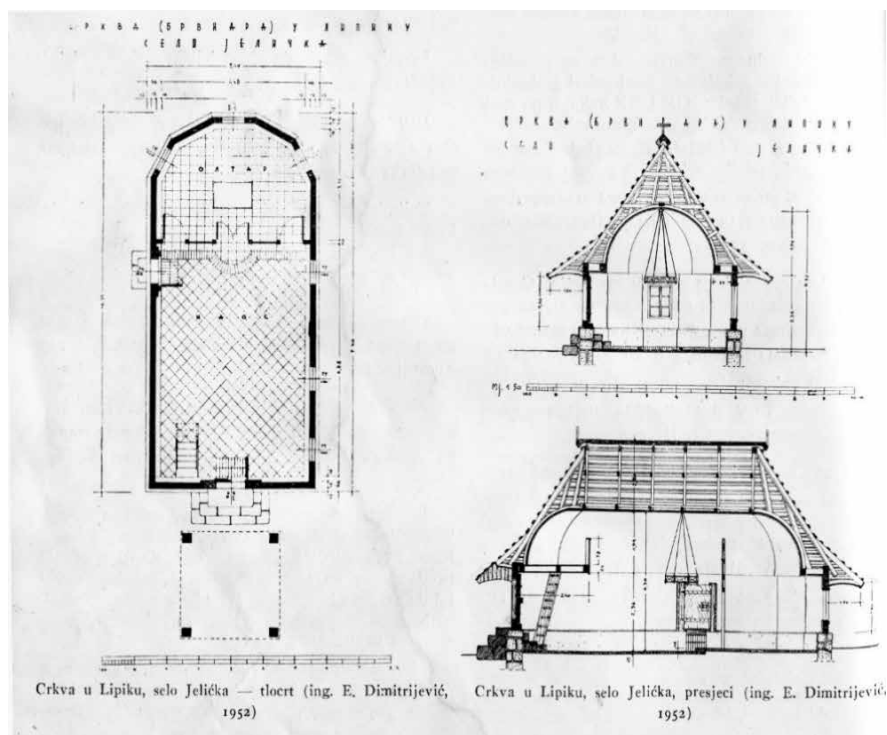


Source: Momirović, 1956.

From the fall of Bosnia and Herzegovina under the Ottomans in the 15th century until the end of the 19th century, a large number of wooden churches and log cabins were built. The buildings themselves vary in their forms, the quality of the workmanship and the decorations that were made, but they all equally served their purpose when such a space was the only place of religious and national, cultural survival of the people. Log cabin churches stand out as a special type of temple. These special monuments of culture and history belong to the folk creativity of mostly nameless, self-taught builders and artists who were no strangers to construction and craft

skills. Their name unequivocally testifies that they are places of worship made of wood. In the expert terminology of cultural and historical values, they bear such a name as houses built of wood are called log cabins. It seems that Jovan Cvijić opted for such an expression at the beginning of the 20th century (Djukić, 2022). The reason for that lies in the fact that this concept has stuck with the people. In our country, log cabin churches denote a certain historical-ethnological type that we would not have the right to change the name of, even though the temples we are talking about here do not represent log cabins in the true sense of the word. These are mostly beamers, talpars or dašcars - at least those that have been preserved to this day<sup>4</sup>.

**Figure 2:** Church in Lipik, Jelička village, plan and sections, ing. E Dimitrijević, 1952.



Source: Momirovic, 1956.

**Table 2:** Wooden churches - log cabins

District of the city of Banjaluka	County BOSANIAN – KRUPSK	District of the city of Derwent
Blaško	Vrtoče	Vinska
Krmin	Grmuša	Kalenderovci
Čardačani	Vodjenica	Dragovići
Busnovi	Vrbljani	Dugo Polje
Bijakovac	Vrelo	Majevac
Gradiška	Lipa	Branešci

4 Dobroslov St. Log cabin churches, Pavlović Prayer in the mountain, p. 21



Dvorište	Glinica	Novi Grad
Demirovci	G. Gradci	Osinja
Međeđa	Dobro Selo	Palačkovci
Gradina	Doljani	Pojezna
Dobrljin	Zborište	Potočani
Prusci	Ivanjska	Čečava
Draksenić	Banjani	
Pucari	Jasenica	
Imljani	Johovica	
Javorani	Ramići	
Jelići	Bravsko	
Jošavka	Pištaline	
Kola	Kulen-Vakuf	
Krupa	Lipnik	
Ljubija	Lukavica	
Volar	Jelašinovci	
Miska Glava	Oštra Luka	
Dragotinja	Bjelaj	
Marička	Prkosi	
M. Palančiče	Veliki Radić	
Piskavica	Vranjska-Badnjević	
Podgradci - M.Brdo	Ratkovo Gornje-Banjica	
D. Podgradci	Ratkovo Donje-Stražice	
Rakelići	Velika Rujiška	
Romanovci	Donji Petrovići	
Svinjuška	Rujnica	
Agići	Stari Majdan-Podvidača	
Svinjar	Donja Suvaja	
Svodna	Ovanjska	
Živinice		
Vodovica		
Šljivno		

*Sours: According to data from the Second Schematism of the Metropolis of Banja Luka and Bihać for the year 1911*

According to this census from 1911, there were 83 wooden temples and chapels in the then Banja Luka-Bihać diocese. According to the time of creation, seven of them date from the 18th century, 16 of them from the 19th century until 1878, and we see that 60 of them were built after the occupation until 1911. Now that number has dwindled to under thirty. It is an indisputable fact that there has been an extinction and a tragic loss of a tourist attraction of specific architecture, which represents at the same time an irreparable cultural loss. Bosnia and Herzegovina is undeniably one of our richest areas when it comes to log cabin churches, both in terms of quality, purpose, variety of purposes and forms. It is noticeable that the rest of the churches preserved to this day can, symbolically speaking, be counted on the fingers (Momirović, 1956).

Adequate presentation, quality tourist offer, medical placement and general positive attitude towards this cultural and historical heritage of this priceless tourist po-

tential in these areas, is our necessity in front of history, science and in front of the modern tourist market. Various historical circumstances, as stated by (Momirović, 1956) in his article *The Wooden Churches of Western Bosnia* are witnesses, influenced the construction of these buildings. In the 18th century, in the matter of primitive buildings in terms of form and appearance, he points out that the technical processing of materials dominates as well as conscientiousness. The buildings are completely suitable for their intended purpose and meet the construction needs both in terms of proportions, in the design of the roof, interior decoration, and in terms of interior covering. Over time, there will be an increase in dimensions, a certain novelty, the appearance of columns in the nave, the introduction of a ceiling and a vault, as well as the use of a porch, but this does not drastically change the concept of the buildings themselves.

Studying the wooden churches on the territory of Bosnia, points out that there is nothing left for us but to protect, preserve and save the other outstanding buildings, churches and others, from the final destruction by conservation, repair, restoration and detailed study; to take forms from folk architecture and use them in practical new construction, adapting them to modern materials, precisely as a form of extension of folk creativity and an original style from our area (Momirović, 1956).

**Figure 3.** *Log cabin church in Palačkovci*



Source: Museum of the Republic of Srpska (Djukanović, 2020)

Certainly, this topic represents the reason for a more detailed and complete obliteration, the permanent loss of the rich material and immaterial heritage of the people from our areas, regardless of religious, national or any other commitment, which should be discussed and worked on more intensively in the time ahead.

We must not forget that the pilgrim's desire to go on a journey does not appear only among those who are steadfast in their faith, but also among other people who are interested in this form of travel and in the context of enriching their own education (Vukonić, 1990). This second type of motivation for a religious journey today largely leads to the trivialization of real spirituality into fashion (Vukonić, 1990).

In his research, Professor Vučetić points out that religious tourism can become an even more significant factor in the development of tourism in destinations, but communication between managers of the religious tourism sector and tourism policy makers should be more frequent and intensive. He points out that this would improve the social status of employees in the religious tourism sectors, and that the theoretical implications are in the field of spreading knowledge about the influence of religious tourism on tourism policy makers (Vučetić, 2021). Based on the above, the media presentation can significantly contribute to the improvement of the offer of log cabins as a place of sightseeing, pilgrimage, and certainly their further survival. Indeed, it is difficult to identify any other human activity as widespread in space and as resistant to time as pilgrimage to shrines (Mylonopoulos, et al., 2019).

**Figure 4.** *Log cabin church in Busnovi*



Source: Museum of the Republic of Srpska (Djukanović, 2020)

Proper media presentation of a tourist product that can be interesting to the modern tourist market represents a fundamental step in the development of reli-

gious tourism itself and the log cabin church in our area. This type of presentation of the log church will put it in its rightful place when it comes to the tourist offer of Republika Srpska (RS). Regardless of the motives of the visit. In order for end users to learn about the offer and services of the entire religious tourism in the Republic of Srpska (RS), the help of the media and public relations is necessary. Promotion is certainly a weak point of religious tourism in the Republic of Srpska, especially when we talk about log churches. We live and find ourselves in a media society where any activity is unthinkable without the media. Successful communication with the media in tourism implies the mastery of knowledge and skills in the area of media literacy and public relations. We live in a time of modern technologies that affect all areas of human life, which bring the economy and the media together in a complex way, which requires constant interdisciplinary cooperation and mutual adaptation. The media is not only a means of information and propaganda, but also a means of economic progress, the development of civil culture in multiculturalism. The media area is becoming a dominant industry in the 21st century because no other industry will have such a strong influence on the thinking of people and management and administrative structures about social responsibility and sustainable development priorities. The media are, in fact, among the most influential institutions in the world. They would have to use their power to a greater extent precisely for the constant promotion of those ideas. The media played a major role in defining and establishing wider communication in emphasizing social responsibility and putting sustainable development on the agenda. As a product of the media industry and market laws, relations with the public have recently been developing in public communication and act invisibly as a key factor between the economy and the media. For this reason, it is necessary to open a dialogue between the media, public relations experts and tourism experts about the importance of access to the media, information sources, media campaigns, creative promotion and international tourism trends of travel.

The President of the Tourist Organization of the Republic of Srpska, Ostoja Barašin, in his unpublished study, which was provided to the author for the purposes of this paper, states in 2018: „In order for religious tourism to be successfully developed in the Republic of Srpska and for a quality tourism offer to be created, cooperation between religious communities, cultural institutions, and the tourism sector is necessary. Considering that these three parties have different roles (spreading faith, general well-being of the community, and generating profit), it is essential to determine how and to what extent religious content will be utilized in the territory of the Republic of Srpska. At the beginning of the development of religious tourism, the tourism sector plays a significant role, as it must spread knowledge about religious tourism, create the content of the tourism offer, research the tourist market, and find a way to tailor and present religious content to potential visitors“ (Barašin, 2018: 79).

## **Conclusion**

By informing ourselves about log churches, we contribute to the development of religious tourism and the spread of good practice when it comes to the concept of spiritual tourism and pilgrimage. A more serious consideration of this topic can be achieved by regular, thorough, long-term questioning of pilgrims and tourists, which was not the case here. This is certainly a small contribution to the academic

view of the very motives and reasons for the promotion of the log cabin church, and it must not be the only one.

Tourism is international. It is evident that it connects many things that, at first glance, seem incompatible. It is developing at a rapid pace. Religious or pilgrimage tourism is an integral part of it. Millions of people of different faiths and nationalities, with different interests and motivations, visit sacred sites around the world every day, which speaks to the significance of religious tourism and pilgrimage travel. There are many examples of this. Here, in this paper, we have attempted to present how the cultural heritage of Bosnia and Herzegovina – wooden churches – represents a resource that is not sufficiently represented in the media and is underutilized. The goal of this paper is to present this gem of religious tourism for the future and to contribute to its development.

The tourist possibilities of religious tourism in the Republic of Srpska have not yet been sufficiently recognized or evaluated. By informing ourselves about log churches, we contribute to the development of religious tourism and the spread of good practice when it comes to the concept of spiritual tourism and pilgrimage.

By taking a detailed look at religious tourism, the needs of the modern man-pilgrim and his expectations, it is possible to more thoroughly and adequately respond to the existing challenges with the complicated demands of visitors. For this reason, we are of the opinion that the research contributes to the necessary and well-sought balance, which, according to the example and practice of other local churches, is also needed by the Serbian Orthodox Church, which is based above all on the rich experience of the ancestors, and the modern segments that will not change it but complete it, which is important in the spiritual order. Ignorance of religious customs and topics must not be an obstacle for visitors in their desire and intention to experience this new experience. It can be concluded that the promotion of the log church needs to be continued and even more intensively done through all forms of media.

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TECHNOLOGY,  
BIOTECHNOLOGY AND  
INFORMATICS





# The Impact of Digitalization on the Effectiveness of Internal Auditing at Maroc Telecom

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**Abstract:** *Today, the rise of digitalization is seen as a strategic orientation at the heart of all companies engaged in various commercial and operational practices. As time goes by, digitalization continues to permeate all business activities, transforming the way they are carried out. At this juncture, the internal audit function, which occupies a large place within the organization's governance matrix, finds itself faced with the obligation to follow the digital trend without making the exception. However, this article looks at the effect of digitalization on the effectiveness of internal auditing. As digital technologies become more widespread, it is essential to understand how they influence audit processes and their effectiveness. By focusing on exploring the crucial aspects of digitalization, such as automation, and their impact on the quality, efficiency and relevance of internal audits. The results highlight the potential benefits of digitization. They also highlight the challenges involved, particularly in terms of data protection and the skills required to take full advantage of new technologies while guaranteeing security. This study therefore contributes to a better understanding of the impact of digitization on the effectiveness of internal auditing, offering key insights for organizations wishing to optimize their audit practices in a constantly evolving digital context.*

**Keywords:** *digitalization - internal audit - automation - efficiency - digital - safety.*

## Introduction

Today's environment is one of perpetual technical and scientific evolution, marking a progress that does not tolerate suspension; any slowing down of pace is considered a retraction. However, all areas of life require a powerful digital edge to keep pace with technological development and avoid being outdone. In fact, competition is one of the key concerns of any company wishing not only to guarantee the continuity of its business, but with this wave of digitalization, these same concerns have

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taken on another inflection directed towards sustainability ahead of continuity or performance. This is the case for Moroccan companies faced with digital transformation, whatever their sector of activity or size, they are all in question if we don't declare that they are in the zone of obligation to adapt with the new working tools available on the digital market.

In the words of Klaus Schwab, "In the new world, it's not the big fish that eats the little fish, it's the fastest that eats the slowest". In this context, the internal audit function cannot deviate from the rule, as it plays an important role within any organization in terms of governance in line with international standards. A well-functioning internal audit function can help to reduce information asymmetry and ensure balance in the decision-making process, not least through the company's audit committee, whose aim is to accompany management in a benevolent way, breaking down traditional routine frameworks. The ultimate goal is to transform the company into a competitive, high-performance organization capable of embracing change, particularly in the digital age.

Indeed, the pressing emergence of digital technology is having a significant impact on companies' competitive and strategic objectives, as well as on their business models and competitive advantages. Moreover, it is clear that digital technology is having a major influence on internal auditing, for example; accounting information systems, management control and auditing. Despite long-established accounting principles remaining stable, the field of auditing is undergoing rapid change and growth thanks to technological development and digitalization (van den Broek & van Veenstra, 2018).

Consequently, to achieve success in this core mission, which is affected by the digital advance, internal auditors must act and go far beyond mere practices, otherwise they will have to move from a standard habitual mode to one where digitalization manifests itself as a prerequisite and not just a prestigious extra. In fact, auditors are obliged to have a vision of the future and to be clear-sighted about digital trends likely to change the rules of the industry and create a new competitive approach, because we are currently going through a fourth generation of innovative assets that are disrupting our daily lives (Hamel and Prahalad, 1994).

Digital developments are driving updates and reforms in the auditing profession. Advances in these recent tools reduce auditors' workload by simplifying and relieving the repetitive tasks associated with traditional methods. Indeed, the advent of these digital tools has also changed the way companies access information, providing in effect new key performance indicators to consolidate their competitiveness (Ramdi, 2021). For this reason, companies need to adapt their approach as digitization advances audit achievements. They must also integrate digital technologies into their future strategies. Digital technology also highlights the ever-changing needs of audit functions, which must deliver in-depth, reliable analysis to their customers. Yet it is important to consider the regulatory and standardized constraints of the audit business when digitizing. Although several researchers have examined the effects of new digital technologies such as artificial intelligence, blockchain and big data on business, specific research focusing on audit firms is still limited. With this in mind, our study will focus theoretically on the literature on audit quality, exploring the profession's evolution towards digitization and the integration of new digital tools, and investigating how this evolution can improve audit performance. On a

practical level, this study will enable us to understand the impact of digitalization on the evolution of auditing practices within Maroc Telecom. The aim of this article is to address the following issues

How does digitalization impact the effectiveness of internal auditing at Maroc Telecom? This problem is subdivided into two overarching research questions:

- How does digitalization impact the internal audit mission as a whole, and the internal auditor specifically?
- What are the challenges of digitalization for internal auditors?

## **Conceptual framework**

### ***Internal audit conceptual framework***

The IIA (the institute of internal auditor) definition is universally known and official. It states that: "Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps the organization achieve its objectives by systematically and methodically evaluating its risk management, control and corporate governance processes, and by making proposals to enhance their effectiveness".

CIPFA 2010 defines internal audit as "an assurance function that provides an independent, objective opinion to the organization on its control environment and on the assessment of its effectiveness in achieving organizational objectives. It examines, controls, evaluates and reports, while respecting the control environment. It contributes to the appropriate, economical, effective and efficient use of the organization's resources".

The APBG definition is not enforceable against the above definitions, so internal audit is presented as: "An independent evaluation function that is established by the management of an organization for the purpose of examining the internal control system as a service to the organization. It objectively examines, evaluates and reports on the adequacy of internal control in the appropriate, economical, effective and efficient use of resources."

All these definitions agree that the internal audit function is an internal corporate function whose primary objective is to evaluate the company's internal control system and monitor the proper use of its resources, with complete objectivity.

According to Suci (2008) "Internal auditing is also known as "control of controls". It is based on the analysis, diagnosis and evaluation of internal activities, based on the analysis and management of corporate risks. In this context, it provides solid support for company management". However, it is also expected to provide reasonable assurance that the company has an efficient and effective internal control system. Internal audit is therefore the guardian of the internal control system, and it is management's responsibility to establish and protect it. We can see from the definitions that there is always a two-way street between the internal audit function and the internal control system, given the importance of the former in the development of the latter. Indeed, a high-quality internal audit function enables the establishment of an effective and efficient internal control system, which ensures operational efficiency. The internal control system has also been defined as a means of ensuring

the optimum use of resources and the transparency of the various processes within the company. In other words, it is defined as the set of control systems put in place by management with a view to overseeing the company's activities in an efficient and organized manner, ensuring compliance with management policies, safeguarding assets and guaranteeing the completeness and accuracy of records as far as possible. On the other hand, the main role played by internal auditing is not just the detection and prevention of fraud and error, as many people think, but the evaluation and continuous updating of internal control systems. It is the internal control system that will reduce and limit fraud and error. In fact, the definition goes on to state that auditing is a practice that cannot be carried out randomly, but is based on a specific method based on the risk approach, and that the notion of risk is not limited solely to operational, strategic and financial risks, but also includes the risk of failing to take advantage of available opportunities. In fact, the determinations explain the auditor's role in a broad way, giving importance to his or her advisory function. Clearly, the auditor is a well-respected professional whose advice must be taken into consideration in order to improve the company's situation, and a distinction is therefore made between two aspects: the traditional one, i.e. recommendations formulated after the identification of dysfunctions, and, on the other hand, advisory missions without the involvement of the auditor.

Direct connection with regular audit assignments. In order to achieve the audit objectives related to internal control, the following sub-objectives are implicit in the definitions:

- Assistance and advice: According to Larry Sawyer, the father of participative auditing, internal auditing should be a partnership between manager and auditor, with the aim of solving problems. In effect, this means that the auditor persuades the manager to act, rather than making the decision for him or her.
- Supporting change: Environmental, economic, technological, regulatory or other changes lead companies to develop strategies to adapt and continue to survive. The internal auditor must help staff to coexist and adapt to this new context, in order to guarantee the company's long-term survival.
- Promoting a culture of control: Internal control is something every employee should be involved in, but the role of the internal auditor is to embed this culture in the minds of every employee to encourage self-control. In reality, internal auditors are the pioneers of control awareness.
- Preventing difficulties: The major role of internal auditing is to prevent any threat to the company's normal operations, by strengthening the internal control system.

### ***Conceptual framework for digitalization***

**Definitions and objectives:** Today, digitalization is a strategic orientation and an essential concept for any company. Indeed, several researchers have defined digitization from different perspectives. In fact, digitization is purely the system of converting an object, tool, process or trade into computer code, so as to make it functionally operable in a digital environment, and to replace it and make it more efficient. It began in the early days of the Internet, when mail was replaced by e-mail, trade fairs

by web forums, and stores by e-commerce sites. The word "digitization" comes from the term "digitalize", with the addition of the suffix "ation". Digitalization is based on the idea of replacing man, precisely replacing the task performed by individuals by setting up a more competitive machine, the fundamental aim of which is to minimize errors, save time and manage the flow of information. There are many terms for digitalization: "digital transformation", "digitalization" or "digitization" are terms that abound in the literature. The terms in question often lack precise definitions and are used interchangeably. A clarification is needed to clear up any confusion and establish understanding:

- Digitization is the process of converting analog or paper-based data into a digital format. By extension, digitization can be associated with making existing processes digital.
- Digitization is a broader concept. In fact, digitization is not simply digitization, in the sense that it involves rethinking current operations from a new perspective made possible by digital technology.
- TD encompasses more elements than digitization, since it takes into account the changes brought about by digitization, whether at a societal, industrial or organizational level. What needs to be grasped is that digital transformation is the broadest sense of digitization; TD is not a simple change, it's a transformation that encompasses the whole structure, it's not just about machines, but also man-machine relations, so digital transformation is a socio-technical phenomenon that acts on and influences both "techniques, tools and processes" and "culture and people".

Based on all this, the authors define digitization as follows: "A process that aims to improve an entity by triggering significant changes in its properties through combinations of information, computing, communication and connectivity technologies." (G.Vial, 2019).

Digitization has the following objectives:

- Responding to customer concerns: Digitization offers customers an extensive array of digital mechanisms that give them constant access to knowledge. In fact, companies have adopted an approach based on the use of these tools to communicate directly with end-customers, in order to understand their opinions and needs. The inter-relationship between company and customer also plays a major role in the development cycle of new products, the creation of attractive offers and the investigation of new service uptake. This procedure stimulates a constant dialogue between companies and their customers, helping to continuously optimize the customer experience.
- Improved decision-making practices: Digitization affects all departments within an organization, not just marketing and communications. It has a significant impact on the following four areas:
- Strategy: the impact of digitalization on an organization's services will automatically impact its strategy. Since it will have to improve it, or even opt for a new strategy specifically designed to align with the way the organization works.

- Organization: digitalization has a direct impact on organization, since once the changes to the entity's services have been made, its organization will change.
- Technology: the impact of digitalization on technology consists in the evolution of platforms and tools to accelerate and enable transformation.
- The organization's culture: we need to start embedding a digital vision in the culture of the entity.

***Digitalization tools***

Tool	Definition
Artificial intelligence	AI is a broad field of computer science which develops systems that focus on the execution of tasks requiring human intelligence, with the aim of surpassing human skills in certain specialized areas (Minsky, 2006).
Cloud computing	Defined as a model that provides access to a set of fast computing services such as computing power and data storage, these resources are distributed according to need and demand, while offering a high level of security. Flexibility for customers to pay only for resources consumed (Yunlong & Luo, 2024).
Block-chain	It is an advanced technology, allowing transactions to be recorded and stored in a secure and transparent way thanks to a network composed of computer nodes in order to guarantee data traceability (Sarmah, 2018).
Big data Analytics	Big data is defined as a process that encompasses a wide range of diverse and complex high-volume data, with the aim of storing, managing and analyzing it to extract quality data. In fact, Big Data relies on a range of tools such as data visualization, data mining and others. (National Institute of Standards and Technology).

***Stages of digitization***

- Initiating digital thinking: At this stage, the comparison between digitization and digital transformation appears first and foremost as the basis for sound digital thinking. This involves defining the technological tools to be integrated and the activities to be automated, as well as adapting the business model to the new digital environment in order to improve value creation and strengthen competitiveness. The approach therefore requires consideration of all the processes involved in the internal audit value chain (support processes, product processes and customer processes).
- Involving employees: This stage requires the active participation of the people who will be affected by it, with the aim of maximizing the benefits and reducing the risks associated with resistance to or rejection of change. However, even internal auditors recognize the advantages and benefits of this approach when conducting their assignments with auditees. It is therefore essential to inform, explain and solicit the opinions of employees, enabling them to familiarize themselves with the new techniques being implemented, while at the same time introducing them to the strategic and managerial changes arising from digital transformation.
- Setting the course: Once employees have understood the “how” of things, it's time to highlight the “why” of things. At this stage, it's a question of talking about the course, in other words, the direction, so we're faced with two scenarios: the first concerns the case of no communication of the course.

- This is a case where the staff of the entity undergoing digitalization can operate within their comfort zones. However, with the implementation of new digital technologies and, above all, without understanding their purpose, they may feel threatened, as digital transformation challenges their comfort zone. For them, digital technology is perceived as an obstacle paralyzing the progress and execution of their mission. Consequently, and especially if the company proceeds with the digitalization of these functions without communicating with employees the interest and added value of this approach (the course), these employees will be unfamiliar with these new working conditions. And the second is the opposite case, where employees are well aware of the purpose of using digital technology and its pure added value compared to traditional methods, so they won't resist taking advantage of the change brought about by digital transformation to learn more and derive maximum benefit.
- Planning priority projects: In reality, the management of the transformation process must consider three priority projects:
  - ✓ Employees of the entity to be digitized: they must be at the heart of the process.
  - ✓ The organization as a whole: As mentioned above, digitalization influences the working environment of the entire organization, which is why technological changes in the internal audit function need to be adjusted to the specific characteristics of neighboring functions.
  - ✓ Data: you need high-quality data to draw conclusions.
- The right tools for the job. At this level, the company must master all the tools available on the market, and be aware of the usefulness, advantages and disadvantages of each tool, and even a prediction of its lifespan before it becomes obsolete. Once the company has established a general and then a specific vision of the market, it must align this market study with its own objectives, characteristics and human and financial needs.

### ***The challenges of digitalizing internal auditing***

"Garbage in, garbage out"<sup>3</sup>, this statement puts the finger on the conditions that generally influence the effect of digitalization. Indeed, the raw material on which digitalization is based is data, which has sufficient initial substance and quality to produce a useful and valuable product, and this requires a combination of technical, financial and human resources. Clearly, the reaction of staff behavior plays a decisive role in the benefits derived from digitalization, so it's obvious to set a course and maintain an informative communication policy. All these elements contribute to meeting the following three challenges:

1. Data availability and quality: These assets are mainly based on digital data, which highlights the importance of having data that is easily accessible, constantly updated and of impeccable quality to ensure the reliability of the syntheses generated. By ensuring that data is available, up to date and of the highest quality, we can also guarantee relevant and accurate analyses.

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3 D.Mellin William Work With New Electronic 'Brains' Opens Field For Army Math Experts [Review] : The Hammond Times, 1957. - p. 65



2. Resistance to change and adaptability: It's vital to familiarize users with each newly deployed digital tool, and give them the time they need to adapt. By stimulating an evolutionary approach and providing solid support, acceptance of change and a willingness to explore the functionalities offered by these tools is fostered. In this way, internal auditors can take full advantage of the benefits they offer.
3. Team skills: It is beneficial to put together a heterogeneous, complementary team that includes both experts in the use of advanced technological tools and experts in traditional auditing methods. This merging of skills enables the potential of digital tools to be exploited to the full, while preserving a solid knowledge base of traditional auditing. As a result, innovation and improvement auditing practices will be strengthened by promoting collaboration and knowledge sharing within the team.

### **The impact of digitalization on internal audit effectiveness**

Stakeholder theory clarifies the mutual exchanges between organizations and the people affected by the company's activities, known as stakeholders. The main idea is that organizations have several stakeholders. According to Donaldson and Preston (1995), this theory argues that different social contracts need to be concluded with different groups of stakeholders, as these different parties express different needs and have different points of view that need to be taken into account on how the company should be run. It is in this context that the theory in question aims to identify these stakeholders in order to increase knowledge and specifically determine who affects the organization's management decisions (Jensen, 2002). In other words, organizations value their internal and external stakeholder groups, who are interested in how the company operates. On the one hand, internal stakeholder groups include employees, managers and owners, all of whom express a clear interest in the company's performance. On the other hand, external stakeholders such as suppliers, customers and creditors form an indispensable network for the company. The internal auditor is thus ultimately responsible for ensuring trust in relation to the quality of reports produced by companies, by ensuring that they meet information needs (Porter et al., 2014). However, satisfying the information needs of many stakeholders is the main scope of auditing. Furthermore, with the development of information technologies, Emerging processes in the context of auditing have made streamlining possible by automating parts of the auditing process. As a result, seeking to automate parts of the auditing process that were previously carried out manually using traditional mechanisms actually enables audits to be carried out more quickly and easily, while protecting all data. Artificial intelligence, for example, can transform auditing through the automated analysis of accounting entries (Baldwin et al, 2006), minimizing the risk of human error and perfectly detecting illicit behavior. In this way, digitization will ultimately improve the transparency of financial statements, making it easier for stakeholders to take more informed decisions (Manita et al. 2020). According to Jachi and Yona (2019), the use of tools such as artificial intelligence improves the efficiency and quality of auditing, which contributes to the evolution of the reliability of financial statements and participates in the development of skills among auditors.

This theory therefore highlights the crucial impact of digitalization on the central pillars of auditing: skills, quality and efficiency.

On the other hand, agency theory also emerges as one of the main theories used in audit literature, since it focuses on the omnipresent relationship between principal and agent, i.e. between the party who delegates the work and the agent, who performs the work on behalf of the principal. Agency theory aims to explain this relationship using the analogy of a contract. According to this view, the owner (of the capital) wants the manager (of the capital) to perform his tasks according to an approach that maximizes the company's profits, but the manager for his part has his own ideas about how he would like to perform his tasks, since his interest is to obtain greater remuneration. This could lead to an agency problem due to conflicting incentives, which are often referred to as conflicts of interest. These conflicts, in turn, lead to agency problems that drive agency costs as a last resort, such as moral hazard and adverse selection. According to Eisenhardt (1989), agency theory is concerned with the resolution of two major problems that can arise in agency relationships. The first problem arises when the principal's objectives conflict with those of the agent, who may be tempted to act in his own interest rather than that of the principals, maximizing only his own utility. So the problem here is to check whether the agent is behaving correctly. The second problem relates to the opposing attitudes of principals and agents towards risk; the agent who performs tasks on behalf of the principal may prefer different risk actions. As mentioned, the main role of objective auditors is to give confidence in the quality of financial reports produced by companies, ensuring that they meet the needs of investors and creditors. However, it is also argued that audit can be seen as a mediator between two parties: shareholders and the board of directors. Consequently, internal audit plays an important role in solving agency problems, as its main function is to assure investors that their interests are being defended. According to Handoko and Lindawati (2021), the auditor is responsible for detecting material misstatements and indications of fraud that could result from conflicts of interest between principal and agent. However, due to the rapid growth of companies, it has become increasingly difficult for auditors to manually analyze the growing and diversified volumes of data. However, auditors have highlighted the intervention of digital technology in their processes to ensure that they continue to provide timely and reliable information for investors, and that the audit remains valuable and relevant, following the development of new digital technologies in auditing techniques. In fact these technologies are useful to auditors in the collection and evaluation of data and audit evidence, which is where the auditor can detect fraud in financial statements and thus resolve agency issues. This is supported by Lombardi and Coll (2015), who argue that new technologies in auditing will make fieldwork more effective and efficient, and maintain that the digital wave will enable auditors to quickly analyze risks and detect fraud.

As an extension of proving the effectiveness of internal auditing at the heart of the digital age, Manita (2020) and other authors have conducted a study assessing how digital will enhance the auditor's role as a mechanism for corporate governance, which confirms that digitization will strengthen the auditor's role in solving agency problems in many ways. According to this theory, the auditor's role in solving agency problems must be effective and efficient, thanks to digitalization and digital transformations, which bring profound benefits to auditors' work, enabling them to use

correct, objective information while saving time and money, and facilitating communication to gain a competitive edge.

### **Research methodology**

Research methodology is the backbone that structures all our work, and in this context we will first adopt a post-positivist paradigm. This paradigm is adopted because it admits the complexity of reality and also recognizes the existence of a set of factors and variables that can influence the phenomenon under discussion, while offering a holistic approach.

Secondly, it is favorable to opt for an abductive mode of reasoning, enabling us to explore scenarios and generate probable explanations. Our research is based on a qualitative approach, with the aim of deepening our knowledge and delving into the thoughts of stakeholders to understand how they perceive the impact of digitization on the effectiveness of internal auditing. In terms of data collection, we opted for semi-structured interviews, as they allow participants a great deal of freedom to express themselves. And once we've collected and transcribed the data, we'll carry out a content analysis using a vertical and horizontal approach.

**Sample presentation:** Our case study company is Maroc Telecom, more commonly known as Itissalat Almaghrib (IAM), a public limited company with a Management Board and a Supervisory Board. IAM was founded in 1998 following the demerger of the Office National des Postes et Télécommunications (ONPT). It sees itself as the central and powerful incumbent operator in the Moroccan telecoms sector, a position it is striving to maintain to this day, while seeking to link its success to the modernization of Morocco's telecoms infrastructure.

Maroc Telecom is considered a dynamic driving force at the cutting edge of technological innovation. It is stepping up its efforts to accompany Morocco in its digital revolution, offering a range of services and products that comply with international standards and norms. These advances, such as ADSL, GPRS and MMS, are having a significant impact on the daily lives of Moroccans, speeding up exchanges and facilitating access to information, and thus stimulating a profound change in their way of life.

**Interview guide** - The use of semi-structured interviews presents a particular advantage in our study. This approach offers a wide range of analysis, which is essential for studying the implementation of internal auditing and, at the same time, assessing the impact of digitalization at Maroc Telecom. Indeed, one of the main benefits of this tool lies in its undeniable ability to foster active and authentic interaction with participants, enabling us to gather and collect high-value information on their perspectives.

Moreover, the intrinsic flexibility of this method allows us to explore unexpected aspects that can greatly enrich our research. By structuring the interview guide in a thoughtful way, we ensure that importance is given to the different key areas necessary to develop an informed and comprehensive analysis of the situation. Our interview guide is therefore structured as follows:

Themes	Axes	Objectives
The inter- viewee's pre- sentation of the company	Presentation of the interviewee and his/her position within the organization. Presentation of the organization and its field of activity.	Benefit from knowledge and understanding of the organization and the person concerned.
The practice of internal auditing	Understand how the practice works and its objectives within the organization	Acquire relevant information to understand the internal audit system within the organization, including its objectives, frequency, approach, tools and people involved in its implementation.
Digitalization	Find out how interviewees understand digitalization, and how they define the concept Learn about the digital tools used, the advantages they offer and the risks they pose in terms of security and confidentiality. The steps involved in digitizing AI practice	Perceive the overall impact of digitalization on the entity.
The impact of digitalization on internal audit effectiveness	Understand its impact on the skills, profile and role of the internal auditor. Understand its impact on working methods, the information processing and professional judgment, and understand its impact on IA quality.	The aim of this theme is to provide an effective and in- depth understanding of the impact of digitalization on all levels of internal audit practice, focusing on the benefits it brings and the threat it poses to the continued availability of jobs for auditors.

## **Presentations and interpretation of results**

### ***The perception of digitalization***

In the world of MAROC TELECOM, digitalization is seen as a major strategic vision rather than just a trend, which is having a significant impact on the company's operating policies. This digital change is perceived as a powerful force permanently disrupting activities and strategies, particularly in light of the COVID-19 pandemic. The perception of digitalization can be reinforced by the internal auditor's statement that: "It's a major challenge we're still facing in order to guarantee our competitive position".

### ***The impact of digitalization on internal audit effectiveness :***

**Impact on the internal auditor** - Based on the internal auditor's findings and the alignment of his opinion with those of other respondents, we conclude that digitalization has had a significant influence on the skills, role and profile of the internal auditor at Maroc Télécom. The internal auditor has had to acquire advanced technical skills to use new auditing technologies, such as data analysis tools and developed software. This has enabled them to collect, process and interpret large quantities of data quickly and easily, transforming their role from a traditional administrative task-oriented approach to a more strategic one.

### ***Impact on the internal audit mission***

**On information processing** – Within Maroc Telecom and the internal audit profession, the effect of digitalization on the information processing process is remarkable. This impact lies in the fact that it has generated a total transformation of an internal audit assignment. Indeed, digital tools such as Big Data have revolutionized the way internal auditors collect, process and store the data and information they need to carry out their work. This progress has led to speed, accuracy, reliability and efficiency of the information processing process.

In fact, internal auditors now enjoy an enhanced ability to obtain both accurate and real-time information. Indeed, automated data collection tools enable continuous monitoring of activities, reducing processing times while increasing the reliability of the information gathered. What's more, advanced data analysis capabilities give internal auditors the power to quickly and widely identify anomalies and potential risks. This influence has radically transformed the auditing profession, enabling it to play a more dynamic and strategic role. Auditors are now better equipped and armed to face the complex challenges of digitalization, and to make a relevant contribution to corporate decision-making and risk management.

**On repetitive tasks** – The speakers demonstrated that digitalization has brought about significant changes to the internal auditing mission, especially when it comes to repetitive tasks with low added value. These speakers put their finger on this transformation by showing that digitalization is helping in a profound way to reduce the number of redundant tasks with a monotonous rhythm. In fact, the internal controller, the internal auditor and also the accountant have all seen increased productivity, which is explained by the automation of these tasks thanks to digital tools, which in turn frees up auditors' time and effort for other value-creating activities. Clearly, repetitive tasks include data entry and collection, while other tasks such as consolidating financial information, payroll administration and leave management have been successfully digitized. This automation has freed up valuable time to focus on complex tasks requiring more analysis. As a result, auditors can devote more of their time to analyzing operational data, which will contribute to improving the quality of recommendations.

**On professional judgment** – The players interviewed have a positive attitude towards digitization, pointing out that it not only alters the professional judgment of the internal auditor, but also facilitates his or her work as a whole. In their view, digital assets provide extensive access to information, facilitating rapid data analysis on a large scale, and enabling more in-depth assessments as time goes by. In other words, this simplicity of access to one's role contributes to the evolution of strategic recommendations. In short, digitization strengthens the credibility of the internal auditor by enabling him to access relevant information, develop robust analyses and ultimately formulate recommendations based on reliable data, this translates into a significant improvement in the quality of professional judgment and decisions made in its area of expertise.

**On audit quality** - The respondents surveyed highlighted the fact that the digitization and automation of auditing tasks has undeniably had a positive impact on the quality of the internal audit profession. Clearly, digital advances have made a significant contribution to increasing the accuracy and reliability of results. Indeed, by automating time-consuming tasks, internal auditors can devote more time, effort and energy to in-depth analysis and proactive risk identification, adding significant value to their work.

Moreover, one of the major benefits of digitalization lies in the ability to automate complex auditing processes, while enabling in-house auditors to focus on the strategic functions that determine the success of their assignments. In fact, automation tools simplify data collection and entry first and foremost. At this level, digitization not only speeds up review processes, but also beneficially reduces the risk of human error and stimulates a more accurate assessment of data, gradually improving the quality of audit conclusions. Ultimately, digitization conditions the quality of internal auditing in several respects.

**On effectiveness and efficiency** - The testimonies of Maroc Telecom's respondents clearly underline the positive impact of digitalization on the performance and efficiency of internal auditing. In fact, they highlight the integration of digital technologies, and their benefits in terms of automating processes, speeding up data processing as already explained, and further improving accuracy while at the same time enhancing audit transparency. In fact, by automating the monotonous tasks that hamper the development and progress of their work, they can focus fully on the essential aspects that frame the auditing profession and determine its success, such as in-depth risk analysis, accompanied by the search for improvement solutions and the formulation of recommendations to optimize internal processes.

Digitization also fosters active collaboration within the internal audit team, as digital tools facilitate close coordination and cooperation between team members, improving a number of key fundamentals: communication, information sharing and informed decision-making. At this level, collaborative platforms and advanced management mechanisms contribute to effective coordination of audit efforts, resulting in increased efficiency and reflecting optimal use of resources. Thus, the strategic objective of Maroc Telecom's internal audit function is to ensure better achievement of organizational objectives while reducing costs. With this in mind, the automation of routine tasks with a repetitive rhythm embodies the crucial role of digitalization in optimizing resources by giving internal auditors the time to concentrate on high-value sub-missions, while aiming to make efficient use of the human and financial resources provided by the organization.

### ***Challenges and risks***

**The challenges faced** - In analyzing the statements made by various experts, we note that the digitalization of internal auditing at Maroc Telecom is facing several challenges. Foremost among these is resistance to change on the part of certain team members, who refuse to leave their comfort zone and fear a loss of control and repercussions on their traditional responsibilities. Putting the new digital technologies into action in existing processes is also a major challenge, involving profound adjustments to procedures and a greater effort to train and support staff.

In addition, the management and analysis of massive amounts of data (Big Data) represents another challenge, requiring technical skills to handle this quantity of data efficiently while guaranteeing security. Coordinating and collaborating with IT teams to ensure harmony during integration also presents other technical challenges.

**Exposed risks** - The various stakeholders from different hierarchical levels within our case study have accurately identified all the risks associated with the digitization of the internal audit profession. These risks need to be taken into consideration in order to put in place parallel strategies to ensure the effectiveness of digital

transformation, while addressing any obstacles that may stand in the way of its implementation. Firstly, there is the risk of dependence on digital systems, a risk that leads to a total neglect of the importance of human intervention generally, and of internal auditors specifically. On the other hand, internal auditing has given particular importance to the risk linked to data confidentiality and security, which has been the concern of all players since the first steps towards digitization. Indeed, with the emergence of digitalization, large quantities of sensitive data are generated and stored, which is why strict measures need to be put in place to protect this information against illegal and unauthorized access, as well as any breach or cyber-attack.

## **Conclusion**

The ultimate aim of this article is to concretize the impact of digitization on the effectiveness of internal auditing, which will enable us to implement all the tangible consequences linked to this transformation in the telecoms sector, thanks to the specific study of the Maroc Telecom company, in order to be able to provide clear and concise answers to our central problem: How does digitization impact the effectiveness of internal auditing?

In this respect, the theoretical approach was developed to understand the fundamentals and key concepts relating to internal auditing and digitalization. However, the findings from the latter highlighted that digitization offers new opportunities and impacts first and foremost on the efficiency and quality of an internal audit engagement. The benefits at this point include process automation, improved access to information, reduced human error and the ability to conduct audits in real time. Thus, the challenges include the overriding need to develop new skills among internal auditors, protect sensitive data and manage the full range of cybersecurity risks. At the same time, practical analysis based on semi- directive interviews with Maroc Telecom professionals enabled us to compare theoretical concepts with the company's reality, in order to gain a better understanding of the specific impact of digitization on the effectiveness of internal auditing. The results showed that digitization, with its various tools, has produced profound transformations in working methods, in terms of data collection and early detection of risks, leading to an improvement in the overall efficiency of audit processes, accompanied by a change in the profile of the internal auditor.

**Limitations:** This conclusion highlights the limitations of the study of the impact of digitalization on the effectiveness of internal auditing. It is very important to note that this study contributed greatly to obtaining relevant information, but it must not be denied that it also presented certain limitations, especially when it came to interpreting the results. First of all, it must be stressed that the findings of my Maroc Telecom case study may be specific to the organization studied, which limits their generalizability to other companies, due to the particularities of this organization such as its size, sector of activity, culture and organizational structure. In addition, the use of a five-person sample can be seen as restrictive, recognizing that each contributor has provided valuable and complementary information, but this cannot represent the entire population of internal auditors, as others may have different opinions. This limitation therefore affects the external validity of the results.

**Outlook:** Our results give rise to promising prospects for future researchers, which lie first and foremost in offering them an opportunity to delve into studies

from other sectors and other companies. In fact, replicating the case study in diverse organizational contexts favors having comparative data and also better understanding and exploring the peculiarities and specificities of the impact of digitalization on the effectiveness of internal auditing in varied environments. However, examining the differences and similarities stimulates the identification of best practices and brings appropriate recommendations to each sector.

Another interesting avenue of research is to explore the extensive use of artificial intelligence within internal auditing practice, as this tool now occupies a major position and offers opportunities for exploiting its role to optimize auditing tasks. In addition, future researchers could take a closer look at the use of artificial intelligence, given that it is one of the digitization tools at the forefront of the debate. It would also be relevant to focus on an additional option based on assessing this impact on corporate governance in the context of internal auditing. Aspiring experts could analyze changes in stakeholder responsibilities, data protection challenges and, above all, the implication of digitalization on transparency, leading to a readable understanding of how digitalization is transforming corporate governance. A final perspective to be added focuses on the skills required for internal auditors to familiarize themselves with an ever-changing environment; it is obvious to study precisely the specific knowledge needed to carry out the mission, and training courses will need to be put in place.

Taken together, these perspectives offer a vast and varied framework of exploration for future expert researchers wishing to delve deeper and explore the subject in question.

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# Integrating CSR into the Technological Era: Towards Responsible and Innovative Development

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**Abstract:** *CSR is a key element for success in the business world, the strategy for achieving sustainable business development. Companies need to embrace technological advances to boost communication, facilitate access to information, improve decision-making and optimize business management. Technological innovation is seen as a key factor in helping companies adapt to changes in their environment, technology plays a vital role in business, especially in the covid 19 period, we've noticed that companies are lacking in technology, which is why most companies are looking to develop technologically, because technology today is the future of business. Empirically, on the one hand, the causal links between CSR, innovation and the integration of technology in companies. On the other hand, the work shows the importance of the mediating effect of technology in SMEs between CSR practices and company innovation. The data used come from a questionnaire survey.*

**Keywords:** *CSR, Technological innovation, Development technology, Socially responsible companies*

## Introduction

As society's expectations have changed, so have those of customers, partners and employees. Over the years, being a socially responsible company has become a major issue and a difficult challenge. It is all the more difficult because the issues are now much more varied, complex and global in scope. In the age of globalization, companies can no longer engage in unethical business practices. Unfair labor practices, child obesity and environmental pollution, for example, are no longer tolerated by the public.

Companies are increasingly aware that innovation is an imperative condition for their performance, and are mobilizing substantial financial and human resources to

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promote it. However, the analysis of innovation has long been limited to technology (Fontan et al., 2004). This can be explained by the rapid development of science and technology. However, several authors have questioned the ability of technological innovation to create and maintain a competitive advantage (Hamel, 2006).

Indeed, SMEs are generally characterized by direct contact, hierarchical distance and rather informal working relationships. This organizational flexibility favors full and effective adaptation to changes in the environment, because it allows access to sources of information and new ideas, among other things. Several studies have shown that SMEs, thanks to this flexibility and their commitment to the values and interests of their local communities, are better placed and more willing to behave in a socially responsible way than large companies.

As part of our contribution, we are interested in analyzing the impact of technological innovation on CSR in Moroccan companies. Our fundamental question is: "To what extent does technological innovation influence the social commitment of Moroccan companies?"

## **CSR: History and Conceptualization**

### ***Historical overview***

From 1977 onwards, less than half of all companies mentioned CSR, whereas by the end of the 90s, over 90% of companies were talking about it. Bowen (1970), considered the pioneer of CSR, introduced the social dimension into global corporate strategy. In 1978, he revisited his own work to question its idealistic and normative nature. According to Bowen, CSR is often associated with concepts such as ethics, values, sustainability and even stakeholder theory. According to the conceptual basis of strategy, the concept of stakeholders and that of social responsibility are interconnected. There is not necessarily an opposition between CSR and profit-seeking; profits are vital to the company's sustainability, while social responsibility evokes a moral obligation on the part of organizations. Consequently, management values have a significant influence on corporate social responsibility practices.

According to the European Commission, CSR refers to companies' responsibility for their impact on society. CSR is thus understood as the set of policy strategies and practices integrated into companies' day-to-day activities, value chains and decision-making processes, encompassing concerns relating to values, ethics, communities, governance, environmental issues, human rights, individual freedoms, working conditions, etc.

Over the years, several international institutions have also developed CSR standards. These standards are global in scope, with repercussions at country level. The aim is to harmonize understanding of CSR issues and models for their implementation, in order to facilitate exchanges and increase interaction between stakeholders. The following is a summary of the main international CSR initiatives over the past three decades (Benaïcha, 2017):

- **1976:** OECD Guidelines for Multinational Enterprises.
- **1977:** ILO Tripartite Declaration on Multinational Enterprises.
- **1992:** Rio Earth Summit (Rio Declaration on Environment and Development and other measures).
- **2000:** United Nations Global Compact.

- **2000:** Lisbon European Council (call for corporate social responsibility).
- **2001:** European Commission (Green Paper to promote a European framework for CSR).
- **2002:** European Commission (Community strategy for promoting CSR).
- **2006:** European Commission (Implementing the Partnership for Growth and Jobs: Making Europe a pole of excellence on CSR).
- **2008:** European Competitiveness Report - Chapter 5 - CSR.
- **2010:** ISO 26000.
- **2011:** Revision of the OECD Guidelines on Business and Human Rights.
- **2011:** European Commission (Communication on CSR and strategy 2011-2014).
- **2014:** Directive 2014/95/EU on non-financial reporting.
- **2015:** Europe 2020 strategy integrating all CSR issues.
- **2015 :** Adoption of the 17 Sustainable Development Goals by the UN to eradicate poverty, protect the planet and ensure prosperity for all.
- **2016:** Revision of the OECD Guidelines on Good Corporate Governance.

### ***Conceptualization***

Corporate Social Responsibility (CSR) is the leitmotif of the new millennium. Debates around CSR-related themes have attracted a great deal of attention. Nevertheless, a unanimous consensus on its definition remains elusive, as CSR does not carry the same meaning for all stakeholders (Harfoush, 2019). Despite the absence of a crystal-clear, universally accepted definition, all the divergent acceptances of CSR converge on one fundamental premise: companies bear responsibilities towards society that transcend and encompass mere profit maximization (Looser et al., 2020).

Carroll (1979) established a taxonomy of corporate responsibilities in four distinct dimensions: economic, legal, ethical and discretionary. The stakeholder doctrine, enunciated by Freeman (1984), contributes to the definition of CSR by clarifying the parties to whom the company actually has a responsibility (Clarkson, 1995), while exposing the instrumental and normative ramifications of the CSR approach (Donaldson and Preston, 1995). Stakeholders include, among others, employees, customers, suppliers, banking institutions, communities and shareholders (Carroll, 1979). This theory is used to analyze the scope and extent of the organization's obligations towards these entities. The influence exerted by stakeholders has prompted companies to adopt a more responsible and sustainable attitude in order to generate constructive feedback and win their support.

In numerous studies and analyses, the "Triple Bottom Line" (TBL) approach is also adopted by various researchers to conceptualize CSR. In line with the thinking of Elkington (2013), a company is considered sustainable if it operates in line with the TBL philosophy. This approach postulates that economic prosperity, environmental preservation and social equity are the three fundamental pillars that CSR must help to achieve. This idea of sustainable development, which underlines the imperative for companies to take account of environmental issues and human rights while preserving essential resources for future generations, is evolving into an essential means that companies cannot ignore to promote their growth.

In this respect, CSR is a multi-dimensional concept that initially seems easy to grasp and deal with. However, to date, it remains difficult to formulate a formal, rigorous and explicit definition that is unambiguous and likely to garner unanimous consensus. Everyone tries to reinterpret it in the way that suits them best. The uncertainty surrounding this concept is not the result of an obscure origin, but stems from a set of ideas and opinions, mainly due to the diversity of perspectives regarding the creation of a clear meaning and simplified conceptualization of this term.

CSR encompasses both social and environmental issues, and represents a broader perspective than the traditional framework of corporate responsibility. It integrates considerations linked to environmental protection and respect for standards of fairness within civil society, in addition to the responsibilities inherent in human resources management (Allouche et al., 2004).

CSR is widely regarded as one of the essential components of value creation. St-Pierre and Mathieu (2004) reinforce this favorable view by emphasizing its increasingly essential role in innovation. They add that CSR is gaining in interest as a significant driver of economic growth and wealth generation. While some see responsibility as purely economic, others recognize that it transcends legal requirements (M'Hamdi & Trid, 2009). CSR is both an innovation and a key success factor, particularly for new businesses that nurture it from within. Pesqueux (2018) points out that CSR is a "pragmatic" and "proactive" response to the environmental, political and social pressures facing multinational companies.

The European Commission's Green Paper (2001) defines CSR as encompassing actions that enable a company "not only to comply with applicable legal obligations, but also to go beyond them and invest in human capital, the environment and stakeholder relations", as well as "the voluntary integration of social and environmental concerns into their business activities and interactions with stakeholders". According to ISO 26000, an organization's responsibility towards the impacts of its decisions and activities on society and the environment translates into ethical and transparent behavior that promotes sustainable development, including the health and well-being of society. This responsibility takes into account the expectations of stakeholders, respects current legislation and is aligned with international standards of conduct. It is integrated throughout the organization and implemented in its relationships. As expressed by the President of the Republic of India, Abdul Kazam Azad, it can be seen as "the right action at the right time" (Tchinda et al., 2018).

CSR does not have a constant meaning at all times and for all actors, and its various definitions leave room for interpretation, as the concept remains largely adaptable, despite its institutionalization through the frameworks and devices of national and international organizations (Tirilly, 2018). In addition to this, there are other synonyms for social responsibility, such as "public responsibility", "social obligations" or "corporate morality" (Acquier & Gond, 2007).

## **CSR theories**

### ***Neo-classical theory***

Neo-classical theory, also known as "liberal thought", is a perspective adopted by figures such as Levitt (1958), Friedman (1962, 1970) and Jensen (2001). This theory considers the relationship between business and civil society to be primarily eco-

nomic. According to its advocates, economic entities contribute to the well-being of society by participating in the market to achieve their own interests. However, this comes at the expense of stakeholders' expectations, which can only be met if they contribute to maximizing shareholder value (Cherkaoui, 2015).

Many theorists (Friedman, 1970; Vance, 1975; Drucker, 1984) argue that this theory is based on the idea of a negative impact of CSR on the company, particularly on shareholders' overall wealth. Several researchers, such as Lee & Park (2010) and Hirigoyen & Poulain-Rhem (2014), have highlighted this negative link, reinforcing the "trade-off" hypothesis. This perspective was widely criticized by CSR's fervent opponent, Milton Friedman. As early as 1962, he categorically rejected the idea of CSR, asserting that "the one and only responsibility of business is to increase its profits". In 1970, he reinforced this extremist position with the publication of the article "The Social Responsibility of Business is to Increase Its Profits", which has since become the doctrine of CSR criticism.

### ***Agency theory and social responsibility***

Agency theory focuses on the study of contracts that bind one entity to another to perform tasks on its behalf, involving a delegation of decision-making power to the agent (agency relationship) (Jensen and Meckling, 1976; Ross, 1973). This theory stems from the uncertainty and asymmetry of information between principal and agent. This divergence of interests is modelled by the principal-agent model, which is a specific case of contract theory, aiming to understand exchange relationships between parties while taking account of institutional and informational constraints (Salanier, 1994). By examining bilateral exchanges, the principal-agent model highlights the importance of integrating the complexity of agents' strategic behaviours into conventional links that define action possibilities and behaviours (Holmstrom and Milgrom, 1991; Grossman and Hart, 1983). Agency theory has developed over time and in the literature, being intrinsically linked to the concept of risk, given the uncertain nature of the relationship between actions and outcomes. In 1976, Jensen and Meckling examined the agency relationship and the underlying problems, highlighting the importance of risk sharing between principal and agent. They addressed the problem of the relationship between a company director (owning a share of the capital to ensure and guarantee total control, where the "director-shareholder" represents the agent) and the other shareholders, who are the principals. When both parties act rationally, the agent will not systematically defend the principal's interests in most situations. However, the principal may offer appropriate incentives to the agent and bear the costs of control to avoid opportunistic behavior, thus limiting divergence from its own interests.

The principal may also want the agent to incur expenses called "commitment costs" to ensure that the agent will not undertake harmful actions. The principal must put in place a control mechanism over the agent, but the commitment can also be linked to the agent's behavior, otherwise the agent's behavior might not be in line with the principal's interests. As a result, a difference in satisfaction represented by a monetary equivalence arises for the principal. Finally, the principal-agent relationship generates agency costs, resulting from the sum of control costs incurred by the principal, commitment costs borne by the agent and residual costs (Jensen and Meckling, 1976). These agency costs can be reduced by using a board of direc-

tors capable of monitoring the agent's behavior. In this case, the agency relationship does not entail a "residual loss". In short, agency theory is based on the relationship between the principal, usually the principal or strategy-maker, and the agent, whose mission is to carry out the tasks assigned to him or her. This theory also explains the costs incurred by both parties.

### ***Stakeholder theory***

It wasn't until the early 1980s that stakeholder theory (PP), one of the major pillars of managerial thinking, also known as Freeman's "Stakeholder theory" (1984), began to establish itself as a conceptual framework for identifying the parties concerned by the social responsibility exercised by these companies. It first emerged in the United States as a liberal reaction to the emphasis on financial value and the primacy of the "Shareholder" shareholder during the terms of President Reagan (1981-1989) (Pesqueux, 2017).

The term "stakeholders" is polysemous, largely due to its broad scope. Managers commonly use the term "parties prenantes", while environmentalists find the term "parties intéressées" more meaningful. According to AFNOR's SD21000 guide, it is defined as "an individual or group that may affect or be affected, directly or indirectly, in the short or long term, by the strategies, actions, messages (and their consequences) implemented by the company to achieve its objectives". The notion of stakeholders is itself an isonymy, playing the role of a "border object" capable of taking on several forms while retaining the same name, without necessarily covering the same realities (Minvielle, 2004 cited by Pesqueux, 2017). The aim of these stakeholders is to build a constellation of interests that are both cooperative and competing, as these interests have intrinsic value and no one interest is expected to predominate over the others (Donaldson & Preston, 1995). Thus, reference to this category aims to balance shareholders among stakeholders (Pesqueux, 2017).

The main foundations of the theory are directly linked to the organization. It is associated with responsibility in its empirical aspect, in the form of a social relationship between "the organization" (a group of leaders with moral foundations) and "stakeholders" (actors interested in all activities undertaken and decisions made by the company). Several authors have drawn on this theory in their research (Freeman, 1984; Clarkson, 1995; Jones, 1995; Wood & Jones, 1995; Mitchell & al., 1997). It has thus made it possible to operationalize the whole range of strategic responses, by identifying the different players who make them up. It is a hybrid empirico-normative theory of responsibility capable of presenting results based on prescribed norms. Some authors see it as an instrumental framework, while others integrate it into a normative framework.

## **Innovation: Theoretical Foundations**

### ***Definition of innovation***

The analysis of innovation has evolved to occupy a central place in economic analysis, with modern innovation analysis focusing more on different terms and types, depending on the nature or impact of the innovation on economic activity. The European Commission's Green Paper on Innovation (1995) defines innovation

as "the successful production, assimilation and exploitation of novelty in economic and social fields". The Oslo Manual (OECD, 1997) defines innovation as "the implementation of a new or substantially improved product (good or service) or process, a new marketing method or a new organizational method in business practices, workplace organization or external labor relations". In the literature, different types of innovation can be distinguished. The first distinction, concerning the nature of innovation, on which the OECD (1997) definition is based, is linked to the company's activity, depending on whether it concerns products, processes, organization or marketing. The second type of innovation concerns the degree of novelty. A distinction can be made between radical and incremental innovation (Lundvall et al., 1988). In our study, we have chosen to focus primarily on technological innovation.

### ***The definition of technological innovation***

Technological innovation is part of the discipline of total innovation. It focuses specifically on technology and how it can be successfully embodied in products, services and processes. Technology as a body of knowledge could therefore be seen as a cornerstone of technological innovation, serving as the backbone of research, design, development, manufacturing and marketing (Jantsch, OECD, 1967).

According to the Frascati Manual (OECD, 2002), "technological innovations include new or significantly modified technological products and processes, where the technological novelty emerges, unlike improvements, from their performance characteristics".

However, technological competitiveness resulting from innovation based on in-house R&D activity is a driving force behind economic development. An innovative company will achieve a high profit rate, giving a signal to other companies. The latter, if they meet the conditions for market entry, will seek to share it, thus reducing the innovator's initial advantage. Although technological innovation can have very high rewards, it is extremely costly and can often fail (Antonelli, 1989). In this context, it becomes clear that technology acquisition cannot simply be equated with purchasing from suppliers. Companies must be able to identify the appropriate technologies they need, evaluate the technological options for their use or modification and, last but not least, integrate the new technologies into their production processes. In other words, companies practicing this type of innovation must have the skills to purchase and use new or significantly improved technologies (Weiss, 1994). Technological innovation is based on the use of previously acquired knowledge, the results of new technologies, technological development or new combinations of existing technologies (Ingham, 2011).

The sources of knowledge linked to technological innovation can be classically broken down into four main pillars:

- research and development (R&D)
- acquisition of externally-developed technologies;
- collaboration with other companies and research organizations;
- other activities linked to knowledge enhancement.

The diffusion of a technological innovation can be defined as the adoption of a technical device on a large scale or by a large population of players. It is the mechanism by which innovation, a microeconomic phenomenon, acquires a meso-economic

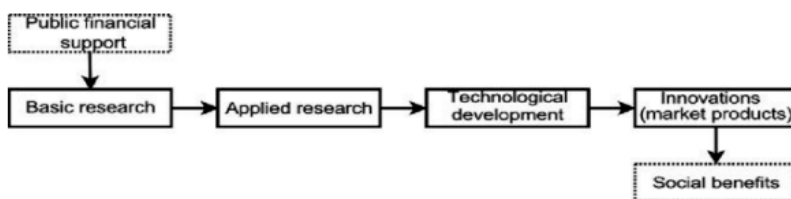


nomie dimension, much of the knowledge mobilized for technological innovation is tacit knowledge, it is not easily transmitted via a publication, an operating manual or even the skills of an individual engineer. This essentially tacit character of technical knowledge stems from the fact that it is strongly specified by the place and conditions of implementation, and that it develops in interaction with R&D and other functions, within the framework of a given firm.

### ***The theoretical framework of technological innovation***

One of the first theoretical frameworks developed to understand science and technology and their relationship to the economy was the "linear model of technological innovation" by Bush, 1945 (see figure II). This model postulates that innovation begins with basic research, followed by applied research and technological development, and ends with innovation:

**Figure 1:** *The linear model of technological innovation*



Source : Bush (1945)

Technological innovation has often been described as a linear process of distinct stages or phases. It begins with scientific discovery, continues with the development of practical applications of that discovery, and finally culminates in success as dissemination and availability to users (see Figure II). The linear model does not describe all the possible connections between the stages of the technological innovation process. The company is a complex organism that is constantly developing, and its uncertain environment can, in turn, lead to new innovations that are useful for understanding the technological innovation process in terms of the dependence of each stage on a previous finalization. The linear model is simplistic. In fact, the innovation process can be quite non-linear, repeatedly building on background knowledge, responding to newly perceived needs and modifying previous concepts of the tool, device or procedure that ultimately evolve (Tornatzky et al. 1990). Nevertheless, progress in innovation requires, firstly, an understanding of the basic principles and processes that enable manipulation of the environment, and secondly, the interaction of often complex social forces through which this understanding must be harnessed (Rogers, 1998).

### ***The relationship between CSR and technological innovation***

Technological innovation has received little attention in the literature on the relationship between innovation and corporate social responsibility. According to our research on CSR behavior in knowledge-based economies, there are two factors that suggest that technological innovation should be associated with CSR behavior.

The first is that companies must have a high-performance research team made up of stable researchers/inventors, i.e. one that will not be destabilized by excessive staff turnover. Responsible human resources management aims to establish a network of collaboration between researchers and even partnerships to identify, pool and combine dispersed elements of knowledge, which requires management by "responsible" stakeholders, and tends to motivate and retain research teams (Cassiman & Veugelers, 2006).

There's a second aspect that gives meaning to the relationship between technological innovation and CSR, namely moral obsolescence. Innovation in industry can change rapidly, especially in a fast-paced technological environment. According to Fee and Hadlock (2004), management is very important in protecting the advances of innovators (a low turn-over rate). Indeed, the first company to implement an innovation can benefit from the so-called "lead time" advantage. In other words, when it comes to major social issues, technological innovation can also consolidate its image by also appearing on the frontier when it comes to major social and societal issues (Le Bas and Suchecki, 2000). From this we deduce that technological innovation and social responsibility must be linked.

In an uncertain environment, companies need to respond effectively and efficiently. However, a good response is not easy until companies have embraced technological innovation. Technological assets help to configure a company's internal processes, absorption capacity and practices, which in turn, make it easier for the company to achieve its economic and social objectives (García-Sánchez et al., 2018). Anwar (2018) argues that the innovation business model encompasses both technological and non-technological innovation. He takes a close look at technological innovation and sees it as a lever for CSR.

In a similar context, Carayannis, Sindakis and Walter (2015) argue that technological advances have forced business organizations to change. Business models therefore need to be integrated in a way that takes into account industry and environmental dynamics. According to Nidumolu, Prahalad, and Rangaswami, (2009), "sustainability is a thread of organizational and technological innovation that produces both net and superior returns". Technological innovation not only helps companies to improve profitability, but also encourages them to facilitate economic growth and improve environmental and employment factors. Technological progress and innovative practices are needed to respond to environmental pressures and gain sustainability. In short, technological innovation is an important factor in organizational sustainability (son et al., 2018).

## **The Empirical Study**

### ***Research methodology***

#### **Data collection:**

A survey was conducted among Moroccan companies in Marrakech to measure their commitment to social responsibility and innovation. The survey was carried out in two stages. Firstly, the first edition of the questionnaire was tested with five SME managers. Thanks to this pre-test, we were able to test the form and order of the questions, review the vocabulary used and assess the interviewee's comprehension and the relevance of the proposed response modality. Next, we conducted an

online survey, using the “Google Forms” tool, among Moroccan business leaders. At the end of this survey, the number of responses was limited. Indeed, out of one hundred and eighty-two e-mails sent, we received twenty-one responses. To remedy this and obtain a greater number of responses, we conducted a face-to-face survey. So, after interviewing 25 company directors, we came up with a total of 46 responses (including 13 companies certified under the CGEM charter).

The research study involves the analysis of a survey questionnaire. The questionnaire instrument consists of statements relating to technological innovation, technological development and CSR. Data were collected from 54 participants (senior managers) in randomly selected SMEs in the city of Marrakech. 46 organizations were initially selected using simple random sampling. The questionnaires were distributed directly to the CEOs of the companies as well as via e-mail to the CEOs. A total of 75 questions were distributed to participants. In addition, participants were assured of the researchers' confidentiality and independence from the organization. Overall, 55.89% of participants were men and 44.11% were women. The age of participants ranged from 27 to 58. The results are still being processed, as I have not received responses from all participants.

#### **Formulation des hypothèses:**

Theoretical exploration of the link between CSR and technological innovation has enabled us to identify two main hypotheses in relation to our research question:

(H1) : Technologically innovative companies have a greater propensity to implement a CSR dimension.

(H2) : Technologically innovative companies have a greater propensity to implement several dimensions of CSR.

These hypotheses refer to the multidimensional nature of CSR practices (economic, social and environmental), and the impact of innovation will be measured empirically as a function of the degree to which companies are involved in different dimensions of CSR. Secondly, the variables in the hypotheses are all contemporary variables, and this also applies to the “CSR and Technological Innovation” variables. There is a time lag between the CSR data and the technological innovation variables.

### **Methodology and Research Results**

To test the impact of innovation on CSR, we used a questionnaire to Moroccan companies on CSR and technological innovation. We collected 46 responses. In order to test hypotheses (H1) and (H2), we collected information on the different components of CSR (economic, environmental, social). Consequently, our dependent variable adopts four modalities: either the company has no CSR approach (the value of the dependent variable is zero), or the company has achieved one of the three pillars of CSR (the value of the variable is 1), or the company is implementing two of the three pillars of CSR (the value of the variable is 2), or the company is implementing all three pillars of corporate social responsibility (the value of the variable is 3).

All the variables used in our study are based on nominal qualitative measurement criteria, the appropriate analysis technique is the Chi-square test. This test aims to detect the relationship between two variables (bivariate analysis) and to verify the influence of one variable on another. The chi-square test cannot be used on any type

of variable, and only concerns nominal qualitative variables, which is perfectly suited to the nature of the data used in our study.

The chi-square test doesn't give us the strength of this relationship. That's why we've also used Cramer's phi and V coefficients, which will give us an idea of the strength of the relationship. So, we'll be using two indicators of strength: Phi and Cramer's V. Both vary from 0 to 1 (the closer to 1, the stronger the link between the two variables).

**Table 1: Interpretation intervals**

Value	Strength of statistical link
<b>0</b>	<b>Absence of relationship</b>
<b>0,05-0,10</b>	<b>Very low</b>
<b>0,10-0,20</b>	<b>Low</b>
<b>0,20-0,40</b>	<b>Moderate</b>
<b>0,40-0,80</b>	<b>Strong</b>
<b>0,80-1</b>	<b>Ladle (collinearity)</b>

Source: Cramer, 1970

To test the hypothesis that technologically innovative firms have a greater propensity to implement several CSR dimensions simultaneously, the dependent variable can take four forms: zero dimensions, one dimension, two dimensions and three dimensions. We use the Chi-square parameters of significance level ( $S \inf 0,05$ ) and Cramer's value to assess the relationship evoked by each hypothesis, in order to confirm or refute it.

### **Description of the study population: The characteristics of the sample selected for our study are as follows:**

**Table 2: Sample by business sector:**

Sector	Number	At %
<b>Research and consulting</b>	<b>6</b>	<b>0,13</b>
<b>Hotels</b>	<b>3</b>	<b>0,06</b>
<b>Transport/ Logistics</b>	<b>2</b>	<b>0,04</b>
<b>Business Services</b>	<b>6</b>	<b>0,13</b>
<b>Restorations</b>	<b>4</b>	<b>0,09</b>
<b>Machinery and equipment / Automotive</b>	<b>1</b>	<b>0,02</b>
<b>Commerce/Trading/Distribution</b>	<b>5</b>	<b>0,11</b>
<b>Building &amp; Construction</b>	<b>3</b>	<b>0,06</b>
<b>Information Technology/Telecom</b>	<b>2</b>	<b>0,04</b>
<b>Agricultural</b>	<b>8</b>	<b>0,18</b>
<b>Banking/Insurance/Finance</b>	<b>6</b>	<b>0,13</b>
<b>Total</b>	<b>46</b>	<b>1</b>

The leading sector in our sample is agriculture at 18%, followed by consulting, banking and business services at 13%. The commercial sector comes 3rd with a rate of 11%, followed by catering (9%), then hotels and construction (6%). In last place

are the transport/logistics (4%) and machinery and equipment/automotive (2%) sectors.

Table 3: The sample by company size:

Sizes	Number	At %
Small	20	0,42
Medium	11	0,25
Large	15	0,33
Total	46	1

The table above shows that 42% of companies are small (according to Maroc PME criteria), while 25% are medium-sized and the remaining 33% are large. The characteristics of our sample reveal a high degree of heterogeneity, both in terms of size and sector of activity.

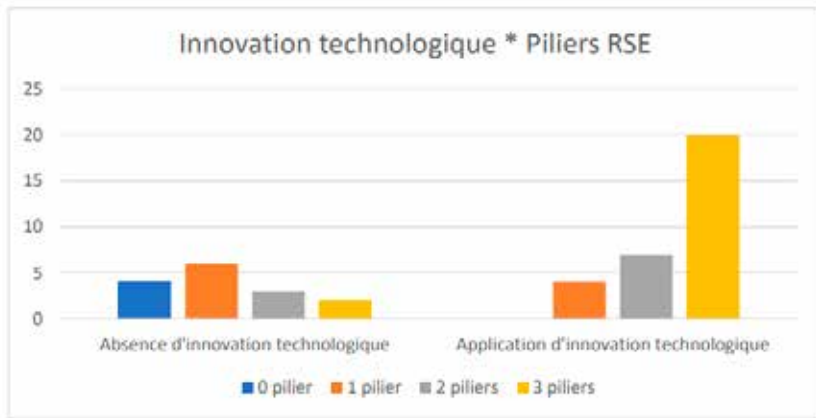
Analysis of the impact of innovation on CSR

Following the same analytical approach used previously, we also analyze the impact of technological innovation on CSR. First, we compare the level of socially responsible commitment observed in innovative companies with that observed in non-innovative companies, using the cross-tabulation below (Figure 4):

Figure 1: Cross-analysis of technological innovation and CSR dimensions

Effectif		Pilier RSE				Total
		0	1	2	3	
Innovation technologique	0	4	6	3	2	15
	1	0	4	7	20	31
Total		4	10	10	22	46

Interpretation of the table reveals the importance of technological innovation and its positive impact on companies' commitment to CSR. According to the table, all companies that adopt a technological innovation are committed to at least one dimension of CSR. We represent the data collected on a bar chart, illustrating this impact more clearly and making it easier to read and summarize the data.

**Figure 2:** Technological innovation and multi-dimensional CSR commitment

This diagram illustrates the relationship between technological innovation and CSR. In the absence of technological innovation, companies tend to implement one CSR pillar (40%), followed by zero (26.67%), two (20%) and then three (13.33%). On the other hand, companies applying technological innovation are fully committed to at least one CSR dimension. These companies are more committed to the three pillars of CSR (64.52%), followed by two pillars (22.58%) and one pillar (12.90%).

These data confirm the existence of a relationship between the adoption of a technological innovation and the level of multidimensional CSR commitment. In other words, the company that implements a technological innovation is more likely to implement several CSR pillars. With regard to this point, we will use the chi-square test to examine the level of impact of technological innovation on companies' commitment to the three CSR pillars.

**Figure 3:** The impact relationship between technological innovation and the CSR pillars

Tests du khi-carré			
	Valeur	ddl	Signification asymptotique (bilatérale)
khi-carré de Pearson	17,249 <sup>a</sup>	3	,000
Rapport de vraisemblance	19,005	3	,000
Association linéaire par linéaire	16,536	1	,000
N d'observations valides	46		

We can say that there is a relationship between two variables if the significance is less than 0.05, i.e. 5%. Therefore, if our level of significance is less than 0.05, we can

say that these two variables confirm that there is a certain impact relationship between them. One influences the other. In our example, the significance is  $0.000 < 0.05$ . We can thus conclude that the application of technological innovation affects the number of pillars implemented.

After using the chi-square test to determine the nature of the relationship between technological innovation and corporate social responsibility, we examine the strength of this relationship by analyzing Cramer's phi and V coefficients.

**Figure 4:** *The strength of the relationship between technological innovation and the pillars of CSR*

Mesures symétriques		Valeur	Signification approximative
Nominal par Nominal	Phi	,712	,000
	V de Cramer	,712	,000
N d'observations valides		46	

As previously stated (Table 1), to affirm the presence of a strong relationship between the variables studied, the V of Cramer must be between 0.4 and 0.8. Analysis of the V Cramer coefficient identified in our study (0.712) indicates a strong relationship between technological innovation and the CSR pillars observed.

All in all, the results of all the tests carried out to assess the nature and strength of the relationship between technological innovation and CSR are consistent. They confirm that the application of technological innovation strongly and positively affects the number of CSR pillars implemented within companies. We therefore confirm hypothesis (H2): "Technologically innovative companies are more likely to engage in at least one CSR dimension".

### Results

The oretical exploration of our research topic shows a certain disparity and lack of consensus regarding the impact of technological innovations on the degree of corporate commitment to multidimensional CSR, particularly in the context of Moroccan companies. With this in mind, we set out to analyze this relationship through an empirical study. Our results clearly show that there is a strong statistical link between technological innovation and CSR commitment, and that firms that apply technological innovation have a greater propensity to implement several CSR dimensions simultaneously. Our founding hypothesis (H2) "Technologically innovative firms have a higher propensity to implement several dimensions of CSR" is validated. On the other hand, the H1 hypothesis "Technologically innovative firms have a higher propensity to implement one dimension of CSR" is invalidated and rejected, in the sense that one-dimensional CSR commitment is observed even in non-innovative firms. This makes it possible to conclude that technological innovation is a real way

for companies to make an effective commitment to CSR by getting involved in three dimensions.

## **Conclude**

This work analyzes the hypothesized relationship between innovative companies and the adoption of CSR methods. To this end, two hypotheses were empirically tested on the basis of data collected from forty-six companies operating in Morocco. It fully verified the second hypothesis, according to which innovative companies should have higher CSR behaviours. Indeed, we found that innovation always has a positive impact on the likelihood of adopting a CSR approach.

Our analysis has verified this strong relationship between technological innovation and corporate social responsibility. When interpreting the results, numerous limitations of this study must be taken into account. The nature of the variables selected and the operating mode adopted do not allow us to generalize the results obtained, but simply provide specific information on the relationship between CSR and technological innovation.

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# Application of Artificial Intelligence in the Electrical Power System

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**Abstract:** *The goal of this work is to clarify in detail what artificial intelligence actually is, where and how it is used, and what benefits it can have for the power system. Artificial intelligence is a very important part of our lives, and it will probably become even more important in the future due to the automation of business operations in the desire to make difficult tasks easier, as well as to reduce costs and create new jobs. The existing power system faces major environmental, financial and technical challenges, which is why it is necessary to modernize it. In the paper, the author concludes that artificial intelligence is certainly useful with almost unlimited potential through the application of new business models such as Blockchain, Internet of Things, Smart Networks, etc. which should and must be used in the power sector, but in an acceptable and socially responsible way. Smart grids aim to deliver electricity from producers to consumers, with the advanced use of two-way digital technologies of all elements of the power grid, which ensures energy savings, efficiency and reduction of energy losses. The smart network applies information technologies, tools and techniques that make the network more efficient and flexible, while consumers become interactive through the application of new technologies that enable control and monitoring of electricity consumption.*

**Keywords:** *smart grid, artificial intelligence, electrical distribution, IoT network management*

## Introduction

The goal of this paper is to clarify in detail what artificial intelligence actually is, where and how it is used, and what benefits it can have for the power system. The subject of this work is to clarify the concept and areas of artificial intelligence and how it can be used in the power system. Today, people are not quite sure what intelligence is and there is no single definition of it (look at how many definitions can be found in just one place), and equally there is no single definition of artificial intelligence (Artificial Intelligence or AI).

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More precisely, there is no legally agreed definition for AI because the field of artificial intelligence is constantly changing and some terms cease to be mentioned in that context while new ones appear at the same time. The energy industry is ideal for the application of artificial intelligence because scarcity forces companies to innovate faster and find new ways to grow in a volatile environment. Artificial intelligence (AI) has experienced tremendous progress in the last few years, and its applications are expanding into more and more fields, including power engineering. Its ability to analyze huge amounts of data, learn from experience, and make complex decisions makes it an ideal tool for optimizing and managing complex systems such as power grids (Sozontov, Ivanova, Gibadullin, 2019).

## **Artificial Intelligence**

Artificial intelligence is a hot topic today, given the numerous announcements and discussions about its definition and application. It can be noted that people interpret artificial intelligence differently, such as that it is certain life forms that can surpass human intelligence, probably due to the influence of Hollywood movies, while others hold that artificial intelligence is any kind of data processing technology. We often ask ourselves: Will a robot take over my job? How will my job change in ten years? One digression on that question is, for example, how much a robot can actually make Mercedes' business easier.

The answer is that it can have a significant impact on reducing costs, increasing the speed and accuracy of production, reducing energy consumption<sup>2</sup>, to the detriment of political and social repercussions, because those same workers will be transferred to a department that does not require great professional preparation, great responsibility and for that they are nowhere near as paid as they used to be. Artificial intelligence can provide cleaner air, an optimized energy system and a reduction in energy consumption, and the work itself will deal with this in the future. Artificial intelligence must serve the well-being of society as a whole and so that a person can really devote himself to his family and the activities he loves (Patni, 2023).

### ***Is access to electricity a privilege of the 21st century?***

Access to electricity may seem like a common thing in the 21st century, but new research shows that the global energy access gap is getting worse due to population growth that is faster than the development of new connections. The current era is marked by increasingly strong economic growth, climate changes that lead to global warming and heat waves, but also the development of technology that requires the use of electricity, for example, the application of artificial intelligence (AI). Climate change is leading to new forms of electricity use, such as electric vehicles. All this causes the fastest pace of growth in the world demand for electricity in the last few years (Đukić, 2024).

How to ensure the stability of the energy system, because consumption should be equal to production, if the surplus is not stored somewhere. How does flexibility aggregation help, what exactly is it all about? Due to the growth of renewable energy sources in the network, we need more urgent digitization, and it is necessary

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2 AI systems vary widely in energy consumption depending on their complexity and usage, but they generally require significant amounts of electricity to process and analyse data efficiently

to bridge the current bureaucracy in order to integrate new technologies into the network and build the renewable energy sources themselves (Đukić, 2024).

### **Impact of Artificial Intelligence in the Energy Sector**

Artificial intelligence (AI) has grown in importance over the past few years in a wide range of industries. artificial intelligence is becoming increasingly important in the energy sector and holds great promise for the architecture of the energy system in the future. Electricity trading, smart grids or the integration of the transport, energy and heat sectors are examples of typical areas of application. The energy sector must be digitized in order for artificial intelligence to be used more often in the energy system, and there must also be a substantial amount of evaluable data.

Artificial intelligence in the energy sector assesses the current situation and helps in taking the necessary steps to realize the sector's full potential. Utilities are working to keep up with these new challenges as demand around the world grows. Artificial intelligence can be gradually incorporated into energy networks<sup>3</sup>, renewable energy sources and decentralized networks to optimize energy use and increase consumer satisfaction. Therefore, artificial intelligence in the energy sector can lead to sustainable practices, lower prices and promote transparency (Patni, 2023).

### **Digitalization of the Electrical Energy System**

Big changes are taking place in the electrical industry. The electric power industry is facing difficulties due to renewable energy sources, decentralization of production and operation of the grid, which is becoming more and more complex. Sophisticated networks and digitization itself are the key to solving the problems these changes represent. It is imperative that the electric power industry be digitized. We will be able to collect and manage the energy system more accurately the more the system is digitized, which will help prevent unexpected fluctuations and complete power outages. Furthermore, we urgently need digitization because the amount of renewable energy sources in the network is increasing (Pavlič, 2023).

The advantages of digitization can certainly be seen in maintaining the stability and reliability of the network, where energy resources and industrial loads in real time provide precision in frequency regulation and response to demand. Also, network monitoring and failure point recognition can provide an advantage to companies through software and storage, and digital technologies applied to the transmission network could be extended to the distribution network. Furthermore, the optimization and forecasting of energy production through the forecasting of wind and solar energy production provides a short-lived opportunity for digital technologies to enable better integration of renewable energy sources. Greater consumer control certainly provides another advantage of digitization. Home energy production systems such as rooftop solar panels by connecting to smart energy management would provide owners with integration into local micro-grids or blockchain programs (Spasić, 2023).

Artificial intelligence (AI) is reshaping the energy sector, revolutionizing the way energy is produced, distributed and consumed. From smart grid management to re-

<sup>3</sup> The energy networks are like a system of roads that transport electricity from where it's made to homes and businesses.

newable energy forecasting and even nuclear power plant safety, AI is fundamentally changing the way the energy industry operates, moving it towards a more efficient, sustainable and secure future.

#### *How is AI being used in the energy sector?*

Artificial intelligence is currently being used in renewable energy sources and the energy sector as a whole, helping to increase efficiency and reduce costs. Here's how:

- Smart networks
- Management of response to requests
- Predictive maintenance
- Prediction of renewable energy sources
- Energy storage
- Carbon Capture, Use and Storage (CCUS)
- Energy trade
- Smart houses and buildings
- Oil and gas exploration
- Monitoring of nuclear power plants

#### *Smart networks*

AI can help manage smart grids, which are electricity supply networks that use digital communications technology to detect and respond to local changes in usage. For one, AI algorithms can predict consumption patterns using historical and real-time data, which can help utilities allocate resources more efficiently. In the same way, AI can also help optimize resource allocation. For example, during sudden periods of high demand, AI can improve the distribution of electricity, ensuring that power is directed to where it is most needed and preventing the risk of black-outs. AI-powered smart grids can also detect network failures or disruptions, such as equipment failures or outages. AI algorithms can identify the exact location of problems and redirect power to minimize service interruptions, reduce downtime and improve network reliability (Gellings, 2009).

#### *Demand response management*

Demand response management (DRM) in the energy sector is a key strategy for optimizing electricity consumption and ensuring the stability of the electricity grid. It involves adjusting the electricity consumption of consumers, primarily commercial and industrial entities, in response to signals from network operators or energy suppliers. This practice helps balance supply and demand during peak periods, initiates load shedding to reduce pressure on the network, and avoids the need for costly infrastructure upgrades.

#### *Predictive maintenance*

Using artificial intelligence, energy companies can predict when their equipment is likely to break down or need maintenance. Machine learning can analyze large amounts of data from various sources, such as usage statistics, weather data and historical maintenance records, to predict potential failures before they happen.

This approach minimizes downtime, reduces repair costs and improves the overall reliability of the energy infrastructure.

#### *Forecasting renewable energy sources*

AI plays a key role in predicting renewable energy production. For sources like wind and solar, which are subject to variability, AI algorithms analyze weather forecasts, historical generation data and real-time conditions. This allows energy suppliers to predict how much renewable energy will be available, allowing for a better balance between supply and demand.

#### *Energy storage*

AI optimizes the storage and distribution of energy from renewable sources. Taking into account various factors such as demand, supply, price and network conditions, AI algorithms determine the best times to store energy, when to release it and how much to distribute. For example, renewable energy sources such as wind and solar are intermittent. However, energy storage enables the storage and use of excess energy produced during peak times when these sources are not producing electricity. This helps make renewable energy sources more reliable and less dependent on weather conditions (Gellings, 2009).

#### *Energy trade*

AI analyzes complex market dynamics in energy trading. It processes real-time data on prices, demand and supply trends, enabling energy companies to make informed and profitable trading decisions. AI also excels in risk management, proactively assessing market volatility and uncertainty. Algorithmic trading performed by AI works at lightning speed, executing numerous trades in milliseconds. It optimizes energy portfolios, simulates market scenarios, analyzes sentiment, automates tasks and continuously adapts to changing market conditions. As such, AI's ability to identify patterns and trends in large data sets is invaluable in navigating the dynamic energy market. His exceptional pattern recognition skills enable him to spot market opportunities and risks that can elude traffickers.

#### *Smart houses and buildings*

The impact of AI on homes and buildings is nothing short of transformative in the quest for energy efficiency as AI transforms them into energy efficient ecosystems. Smart meters and IoT<sup>4</sup> devices work in concert with AI to create intelligent and responsive ecosystems. These systems continuously monitor energy consumption in real time, allowing AI to make data-driven decisions that optimize energy use.

### **Application of Artificial Intelligence in the Management of Electrical Energy Systems**

The application of artificial intelligence (AI) in power system management is becoming increasingly important due to the increasing complexity of power systems and the need for efficient, reliable and adaptable solutions. Artificial intelligence

<sup>4</sup> The term IoT, or Internet of Things, refers to the collective network of connected devices and the technology that facilitates communication between devices and the cloud, as well as between the devices themselves.



is widely accepted to solve optimization problems in power systems, such as optimal power flow, unit commitment, and economical dispatch. Artificial intelligence techniques, including genetic algorithms, particle swarm optimization, and artificial neural networks, have been applied to solve these complex optimization problems with greater efficiency and accuracy compared to traditional methods. By optimizing the operation of power system components, AI can contribute to increasing efficiency and profitability (Kezunovic, Liao, Deslatte, 2017).

Accurate forecasting of load demand, renewable energy production and electricity prices is crucial for the planning and operation of the electric power system. Artificial intelligence techniques, especially artificial neural networks, support vector machines and deep learning, have shown excellent performance in forecasting tasks due to their ability to learn from historical data and identify complex patterns. Artificial intelligence-based predictive models can adapt to changing system conditions and provide reliable forecasts, enabling power system operators to make informed decisions. This in turn helps to maintain the balance between supply and demand, reduce operating costs and increase system reliability.

Artificial intelligence techniques have been used to design advanced controllers for various power system components, such as generators, transformers and power electronic converters. Indirect logic, predictive model control and reinforcement learning have been used to develop intelligent controllers that can effectively manage power systems under various operating conditions. Management strategies based on artificial intelligence can improve system stability, improve power quality and optimize resource utilization, contributing to the overall performance of power systems. By quickly and accurately detecting and isolating faults, artificial intelligence can prevent damage to equipment, reduce the duration of interruptions and minimize the impact of faults on the electrical network (Kezunovic et al., 2017).

One of the more recent trends in the power industry is the use of artificial intelligence for predictive maintenance of power system equipment. By analyzing historical data and monitoring equipment performance in real time, AI<sup>5</sup> can identify early signs of potential failures, enabling maintenance activities to be carried out before critical problems arise. This proactive approach can help reduce unplanned outages, extend equipment life, and reduce maintenance costs (Wang, & Yang, 2018).

## **Application Of Blockchain Technology In Power System Management**

Blockchain technology, originally developed as the underlying technology for cryptocurrencies such as Bitcoin, has attracted considerable attention for its potential applications in various industries, including power systems (Mengelkamp, Gärttner, Rock, Kessler, Orsini, Weinhardt, 2018). This distributed ledger technology enables safe, transparent and protected data management, which can be an advantage in power system management. Blockchain technology can also be used to improve network management, especially in the context of demand response (DR) programs. DR programs encourage consumers to adjust their energy consumption in response to grid conditions, such as reducing their demand during peak periods or increasing their demand when renewable energy production is high. By using blockchain technology, utilities can securely and transparently record and validate

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5 Artificial intelligence (AI), in its broadest sense, is intelligence exhibited by machines, particularly computer systems.

DR events, ensuring accurate and timely settlement of financial incentives for involved consumers. Moreover, blockchain can enable decentralized, automated control of DR events, facilitating more efficient network management and potentially reducing the need for costly network infrastructure upgrades (Wang, & Yang, 2018). Cybersecurity is another area where blockchain technology can provide significant benefits to power systems. As power systems rely more and more on digital communication and control, they become more and more vulnerable to cyber attacks, which can have serious consequences for the stability and security of the network. By exploiting the inherent security parameters of blockchain technology, such as cryptographic hashing and consensus algorithms, energy systems can improve their cybersecurity, ensuring the continuous and secure operation of critical network infrastructure (Wang, & Yang, 2018).

Blockchain technology holds great promise for power system management, particularly in the areas of P2P energy trading, network management, and cybersecurity. As the technology continues to mature and develop, blockchain is expected to play an increasingly important role in shaping the future of power systems, enabling better, safer and more resilient energy management. Certainly, the advantages of digitization can be seen in maintaining the stability and reliability of the network, where energy resources and industrial loads in real time provide precision in frequency regulation and response to demand. Also, monitoring networks and identifying the point of failure can provide an advantage to companies through software and storage, and digital technologies applied to the transmission network could be extended to the distribution network (Mengelkamp et al., 2018). Furthermore, the optimization and forecasting of energy production through the forecasting of wind and solar energy production provides a short-lived opportunity for digital technologies to enable better integration of renewable energy sources. Greater consumer control certainly provides another advantage of digitization. Home energy production systems such as rooftop solar panels by connecting to smart energy management would provide owners with integration into local micro-grids or blockchain programs. The relatively weak possibility of adaptation of the older population should be highlighted as a disadvantage, given the rapid rate of change. Technology is changing literally every day and it's hard for older people to keep up and adapt. This could create additional stress and a certain bad psychological impact.

#### *Price forecast and electricity consumption*

The purpose of the load forecast is certainly to predict the load in order to be able to plan in advance. The forecast is very important for the energy market and other market participants for better transaction planning and bidding strategies. What is important to distinguish are certain factors that affect the loads. Meteorological factors, economic conditions in an area and the weather factor in terms of seasons, time of day, etc. According to Klešić (2018), the factors used to predict the price of electricity can be grouped as follows:

- Time: hour of the day, day of the week, month, year and special days,
- Reserve: historical or projected,
- Price: historical price,
- Load: historical or projected. Load changes can affect the price,
- but also changes in load prices. This is why price and load forecasting

- observed in the same model,
- Fuel price.

Predominantly, the forecast is based on short-term consumption forecasts due to the increasing rate of decentralization of the energy system. As a result, there are more and more unknown variables and more difficult assessment. The forecast also helps in the detection of possible higher consumption than production which results in a too strong drop in voltage and certain problems with maintaining the stability of the system. On the contrary, if consumption is less than production, then useless energy is produced and the producer has losses (Klešić, 2018).

## Conclusion

The adoption of AI in the energy sector is not without its challenges. First, there is a significant upfront cost associated with implementing AI systems and integrating them into existing infrastructure. This cost can be a barrier for some energy companies, especially smaller ones with limited budgets. Second, the energy sector deals with huge amounts of sensitive data, including network information, customer data and operational details. Ensuring the security of this data is paramount, and AI systems must be protected from cyber threats and breaches. Furthermore, there is a shortage of trained AI professionals who understand both the energy sector and AI technologies. AI holds promise in the energy industry and will continue to play a role in optimizing energy production, distribution and consumption. We can expect increasingly sophisticated solutions driven by artificial intelligence that improve the efficiency of renewable energy sources, improve grid stability and reduce greenhouse gas emissions. Smart grids and demand response management will become more prevalent, empowering consumers to actively manage their energy consumption. Scheduled maintenance will reduce downtime and increase equipment reliability. AI will also contribute to carbon capture and storage efforts, helping to combat climate change. As technology advances and AI becomes more integrated into energy systems, we can expect a more sustainable and efficient energy landscape.

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