



Identifying the Challenges to Social Finance in the Mauritanian Fishing Industry

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ABSTRACT

In Mauritania, the fishing industry is of vital importance. This industry serves as a pivotal driver of the nation's diversified economic and social development of the nation. It lays the cornerstone for the overall advancement of Mauritania Significantly contributing to the nation's Gross Domestic Product (GDP), employment rates, and public revenue generation, which, in turn, underpins essential public services and social programs. Despite its immense potential and significant contributions, the fishing industry grapples with a myriad of formidable challenges. This study aims to identify the obstacles and challenges in the fishing industry in Mauritania and explore the potentials of implementing Islamic social finance to support the industry. The identified challenges facing the fishing industry primarily concern its financing mechanisms, infrastructure quality and adequacy, regulatory complexity, environmental sustainability practices, and competitive pressures from international markets. This study employs a qualitative research methodology. The findings shed light on the complex and multifaceted interplay of the economic, financial, legal, and operational problems that hinder further development of the fishing industry in Mauritania

1. Introduction

The country of Mauritania has historically relied on its fishing industry to support its economic development. This sector has long been an important generator of revenue, a provider of diverse and plentiful job opportunities, and a contributor to a critical influx of foreign currency for the nation (Ghalla & Moussa, 2021). Positioned next to the expansive and rich Atlantic Ocean, Mauritania has access to some of the world's most productive and biologically diverse marine ecosystems. The Mauritanian Exclusive Economic Zone (EEZ), which covers more than 230,000 square kilometers, is home to a striking variety of fish species—including octopus, shrimp, and numerous pelagic fish—that are of immense importance to the country's export economy. Fish not only form the backbone of Mauritania's economy; they also underwrite its social structure. It is estimated that 300,000 people in Mauritania depend on fishing for their livelihoods, not all of whom work on boats. Many of these workers are employed in sectors just off the water, like seafood processing (Economiques, 2024).

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This industry remains the second most significant source of employment in the country, right after the public sector. That should say something about how central this industry is to the Mauritanian economy and its overall workforce. Still, the fishing sector has a number of increasingly diverse and interconnected problems, many of them longstanding ones, that it must contend with (Dahi & Enweruzo, 2024).

The problems besetting this sector are compounded by a number of external influences principally environmental degradation and fluctuating international markets, which are largely beyond the control of those who work within it. But to attribute the sector's troubles mainly to such outside forces is to miss the essential point: much of what ails the sector originates in systemic inefficiencies that are built into its very frameworks. Poor regulation and outdated management practices have seriously undermined the sector's ability to bring itself up to the level of modern, global standards necessary to render it competitive. In recent years, the sector's underperformance can be traced with satisfying clarity to factors such as persistent mismanagement and a nearly total failure to adopt policies that ensure a sustainable, development-oriented future for the world of work in the marine sector (Bay, 2023).

The fishing industry faces a sophisticated sustainability problem that requires immediate and urgent attention. It is a significant source of employment globally, providing livelihoods for a vast workforce. Nevertheless, it constitutes a massive natural force, its practices transgressing ecosystem boundaries and penetrating deeply into their ecological intricacies. As an extraction industry characterized by *de facto* privatization, it erodes the commons. Consequently, the sustainability challenges posed by an industry that employs a significant workforce, degrades natural ecosystems, and exploits common resources warrant serious consideration. It is an emblematic problem in a world where over a billion people live on less than \$2 a day and where natural ecosystems have a hard time remaining intact (Alacevich, 2020).

Mauritania's territorial waters face significant overfishing by foreign fishing fleets, leaving local fisheries depleted. As a result, coastal communities, such as those near the fishing port, experience economic hardship and social disruption. For Mauritanian youth, the deep-sea fishery is as inaccessible as the desert leaving them with the prospect of pursuing often elusive opportunities in distant lands, a path historically associated with French colonial influence. Mauritania, in short, is rendered long and barren by the weak penetration of foreign consuls. The predominant export of Mauritanian fish, fish products remain unprocessed, a practice that significantly diminishes their economic value. Processed seafood products command premium prices in global markets, suggesting that Mauritania's marine resources could yield substantially greater economic benefits if exploited more optimally. The absence of value-added seafood has resulted in the loss of potential employment opportunities for Mauritians, particularly in the realm of fish processing. (Khlil, 2024).

At the same time, many ecological concerns threaten the Mauritanian fishing industry. Climate change is altering oceanic ecosystems and fish distribution. A number of studies by various organizations predict dire results, with some suggesting that as much as 75 percent of fish species may be at risk of extinction by 2030 unless dramatic changes occur (World Bank, 2018; World Wildlife Fund, 2017; Andonova, 2016). These studies frequently cite the synergistic effects of rising water temperatures and ocean acidification, which is caused by increased absorption of atmospheric CO₂ by seawater. Compounding these problems are serious impacts from land-based pollution that are very concentrated close to shore and where many fish species breed. Coastal habitat destruction and sea-level rise are two additional serious problems directly affecting the fishing communities of Mauritania.

Mauritania's economic problems are tied to a deeper, systemic issue: the country's failure to adequately diversify its economic base. The fishing sector undeniably plays a crucial role in Mauritania's national economy, supplying many direct and indirect jobs. The fishing industry's current structure and operations, hinder its ability to secure the long-term viability of the numerous jobs it generates, but it is also reform averse. Both the government and the private sector have, failed to develop and implement a comprehensive growth strategy for the fishing sector. This collective failure has hindered the sector's potential to achieve sustainable growth and innovation that could contribute to steady job creation and long-term job security (Bay, 2023).

Mauritania's fishing industry is facing a complex and profound crisis. It is beset by longstanding regulatory challenges, severe environmental degradation, and absurd economic mismanagement. Despite the fishing sector being recognized as a prime source of job creation and foreign currency, it remains mired in a series of long-standing systemic challenges. Among these are overfishing, inadequate laws enforcement, underinvestment in value-added coastal processing, and myriad failures of the fishing sector as a whole to generate real and sustainable economic growth. The fishing industry faces imminent threats from climate change and pollution both of which exacerbate the vulnerability of the fishing economy (Ghalla & Moussa, 2021).

The fishing industry in Mauritania has an opportunity to significantly modernize but has instead been stagnant and is largely underperforming. The missed opportunities within the Mauritanian fishing sector could significantly bolster the Mauritania's national development and economic resilience. Moreover, the sector's sustainability is facing growing environmental concerns. This problem is compounded by the fact that both the economic and environmental poverty of the fishing sector pose threats to something that amounts to a clear goal in Mauritania's national development plan: the restoration of living conditions of Mauritanian citizens (Seck et al., 2019).

A significant proportion of the fishing community in Mauritania, approximately 85%, live below the poverty line. The country's long coastline, along with its vast marine resources, make it ripe for more development; yet the fishing sector suffers from a lack of investment, mismanagement, and over-exploitation. Mauritania's fishing resources are under threat from overfishing and climate change and from the challenges that face the fishing community. Fishing is the lifeblood of both Mauritania's coastal communities and is a cornerstone of its national economy. However, the fishing industry faces an uncertain future, necessitating a proactive approach from environmental advocates to foster its long-term growth and sustainability, thereby ensuring its alignment with national development goals.

The primary aim of this study is to provide a comprehensive analysis of the multifaceted fishing industry in Mauritania, with a particular emphasis on assessing its substantial contributions to the national economy, specifically focusing on dimensions such as economic growth, the creation of employment opportunities, and the generation of foreign exchange revenues that are crucial for the nation's financial stability. Moreover, this article endeavors to systematically identify and elucidate the pivotal challenges that serve as impediments to the advancement of this vital industry, engaging in a thorough exploration of the underlying factors that give rise to these significant obstacles, which may hinder its potential for expansion and development. Ultimately, the overarching goal of this study is to propose a series of pragmatic and sustainable solutions that are carefully designed to effectively address these pressing issues, thereby ensuring not only the long-term viability of the fishing industry but also its sustained function as an indispensable catalyst for the continuous economic development of Mauritania.

2. Literature Review

Many studies have examined the complex dynamics of the Mauritanian fishing industry, focusing on its important role in economic development, job creation, and poverty alleviation in the country (World Bank, 2018; IMROP, 2020). Mauritania's Exclusive Economic Zone (EEZ) is considered a premier fishing ground. Its abundant, high-value fish species yield a large proportion of the country's total GDP, making the fishing industry one of Mauritania's most potent economic engines (FAO, 2021). Nevertheless, despite its potential, the industry remains hindered by numerous efficiency issues and structural weaknesses. A comprehensive assessment conducted by the International Monetary Fund (IMF, 2022) identified significant challenges, including inadequate infrastructure for both facilities and logistics, ineffective cold chain systems, and insufficient processing capacity, as major drawbacks that limit the sector's full potential.

Moreover, the fishing industry is often heavily critiqued for a governance structure that closely resembles a "house of cards." Citizens have little to no say in decisions made on their behalf. The governance of the fishing industry is certainly opaque; it closely resembles a "governance by closed door." Indeed, the governance of the fishing industry has often been criticized. The regulations that do exist, and the decision-making process behind them, are unclear to the average citizen, even once the citizen is granted access to the governance process. In conditional access, the average citizen must also wade through the average citizen's easily achievable pathway to any kind of meaningful financing—which, in the case of the thinly capitalized fishing industry, is a right of way to a dead end (Gheeraert & Weill, 2015).

Moreover, the fishing industry in Mauritania depends too much on investment capital from abroad, especially from such countries as China and those in the European Union. This overreliance on foreign fishing fleets raises significant concerns regarding the management of fish stocks. Not only does it risk the potential for foreign interests to siphon off profits, but it highlights the apparent neglect of long-term sustainability initiatives by local authorities. This results in a significant loss of the local control, thereby jeopardizing the possibility of sustainable management of Mauritania's most important natural (Coste et al., 2018).

Overfishing and climate change are endangering fish stocks, which threatens the livelihoods of communities that depend on fishing. A study by IMROP (2021) found that the number of fish is steadily declining. The main reason for this is IUU fishing, which has afflicted the industry because of the poor enforcement of fishing regulations. Many researchers have examined the Mauritanian fishing industry and highlighted its serious growth potential and the many challenges it faces. Overall, the prospect of the fishing industry is a big deal for Mauritania, because it is an industry that could make a very substantial contribution to the local economy and job creation.

According to comprehensive reports released by reputable institutions like the Food and Agriculture Organization (FAO) and the World Bank (2018), the fishing sector is a very prominent part of the national economy. It makes a significant contribution to the Gross Domestic Product (GDP) and serves as one of the main sources of employment for people in this country who live along the coast (Einarsson et al., 2020). Nevertheless, a consistent and familiar refrain in numerous academic studies and articles is that there is remarkable infrastructure deficit, including outdated fishing vessels and a dearth of processing plants and cold storage facilities. This infrastructure deficiency limits the industry's ability to fully realize its potential.

In addition, the fishing sector's regulatory framework is often characterized by its obsolescence and inadequate enforcement mechanisms. This allows illegal and unsustainable fishing practices to get a foothold, putting marine biodiversity and the fishing industry's long-term sustainability at considerable risk (Einarsson et al., 2020).

Mauritania's marine resources are primarily developed with funding from foreign investors, especially those from the EU and China. This raises serious questions about the control that Mauritania has over its marine resources and the long-term sustainability of the fisheries sector. Among other things, the concern stems from the observation, despite declining local fish stocks, some people in Mauritania are paying excessive amounts for limited fish supplies (Fisheries and Coast Guard, 2014). Foreign investment may bring some short-term benefits, but it often leads to serious stock depletion. Mauritania's fisheries are increasingly vulnerable to investment-driven stock reduction due to persistent environmental degradation, exacerbated by overfishing and climate change. (Leonard et al. 2019).

From an operational point of view, Mauritania's fishing industry confronts a serious problem due to obsolete infrastructure. Mauritania's fishing ports and processing facilities are far behind in the race toward the modern conveniences that fulfill today's market demands. The current processing facilities lack the capacity to adequately address the complex demands of contemporary fish processing and preservation techniques. Fresh fish must be immediately made into frozen fillets at the Nouadhibou plant for the export market to compete effectively with other African and global fish products. While the operational requirements of this standard are not particularly stringent, the political barriers to implementation are significant. Private investors possess the necessary capital but lack the capacity to construct the requisite infrastructure. Mauritania's ability to export fish as a tropical country does not mean that the fish in Nouadhibou can compete in the international market with sea bass from France (Hansen, 2022).

From a financial standpoint, fishing industry SMEs face difficult obstacles to acquiring acceptable growth capital. Conventional financial instruments often carry prohibitively high interest rates, further limiting their access to affordable financing options. In this respect, the fishing sector is not much different from other industries within acceding economies, which tend to be underserved by financial institutions. The situation may even more dire within the fishing sector, as Islamic finance, a more equitable alternative to conventional finance, is significantly less developed and accessible compared to other sectors (BIM, 2021). Meanwhile, comprehensive surveys of fishing sector stakeholders have revealed some troubling overall insights, the highlights of which include a significant number of business owners in the fishing sector who do not have the growth capital necessary to modernize their fleets or invest in innovative technologies (World Bank, 2021).

The many environmental challenges faced by the fishing industry, especially overfishing, constitute a direct threat to the sustainability of this sector. Mauritania is part of a shared space, the Atlantic Ocean, which is under increasing threat from overfishing. Foreign fleet overfishing of shared fish stocks results in a dramatic decline of those stocks in Mauritania. The depletion of any shared fish stock presents a serious threat to the fishing livelihoods of thousands of Mauritians. Moreover, marginalized Mauritanian fishermen, who are most vulnerable to overfishing, have limited influence on the governance of shared ocean spaces and the regulation of fishing fleets (Nianek, 2020).

Mauritania's fishing industry faces a host of problems including legal, financial, operational, and environmental issues, necessitating urgent and coordinated intervention. A primary challenge facing the fishing industry is the inadequacy of the existing legal framework. This framework lacks essential elements of effective regulation, including transparency and broad stakeholder understanding and compliance. The system's current dysfunction allows foreign fleets to exploit Mauritania's fishing grounds with impunity (L'IMROP, 2019).

The industry's operational constraints are compounded by the presence of antiquated infrastructure, which severely limits the seafood industry's capabilities in reaching export markets worldwide. During industry visits to fishermen in the country's principal seafood trading post, Nouadhibou, the deficiencies in the two primary areas of cold storage and modern fishing equipment

were notably inadequate. The deficiencies in the two primary areas of cold storage and modern fishing equipment are severe and impede the seafood processing and exporting industry's ability to achieve optimal success. Furthermore, the backbone of the fishing industry, composed of small and medium-sized enterprises, struggles to access even basic financial services (L'IMROP, 2019).

The situation is complicated by environmental issues, especially overfishing and climate change, which affect fish populations. Climate change has transitioned from a distant threat to a tangible reality, resulting in rising sea temperatures, drastic and erratic shifts in fish populations, and the destabilization of many fisheries across the globe. These interrelated problems impact Mauritania's fishing communities in profound ways. Poorly managed, overfished, and unstable fisheries cannot provide communities with the reliable sources of protein and income sources essential for healthy, secure, and economically stable lives. Those who are concerned about the wellbeing of Mauritania's fishing communities should take note of this issue (Memorandum, 2020).

3. Research Methodology

This investigation uses qualitative research methods to get at the heart of the multitude of problems besetting Mauritania's fishing industry. A content analysis of diverse array of documented literature reveals the industry's decline, lack of regulatory oversight, financial instability, and continued exploitation by foreign fleets. Credible and pertinent sources were rigorously applied to elucidate the complex and opaque aspects of the fishing industry, ultimately providing a more or less coherent understanding of its operations (Yin, 2015).

The study unfolds in an organized manner across several distinct phases. It first carries out a detailed, insightful review of academic literature and governmental reports that provide vital context and background about the fishing industry's current state and unfolding dynamics. Subsequently, a rigorous analytical framework is required to dissect the industry into its constituent components, thereby enabling the identification and explanation of both key problems and key emergent opportunities within the components. Throughout, the analyses and explanations are illuminated by detailed examples (Creswell & Poth, 2016).

The methods used in conducting this study were decidedly qualitative. This approach is best suited for shedding light on the composite, three-part research problem within the practical constraints and limited time available for the study. In-depth content analysis of a mixture of written materials allowed for a systematic and comprehensive evaluation of the underlying assumptions and arguments related to the policy problem. In the end, a thorough examination of the documents yielded predictable but robust findings, which were further corroborated by the analysis.

The study's focus on qualitative content analysis allows for a complex and sophisticated understanding of the many intricate issues surrounding Mauritania's fishing industry. It ultimately yields some precious and pertinent insights that can inform both the development of relevant policy and the kind of operational improvements that are much needed in the sector. Given the almost unparalleled availability of industry reports and policy documents that provide a wealth of insight into the fishing sector's legal, operational, and financial dimensions, the document analysis method appears particularly well suited for this study.

Using this method, the study tries to bring to light any themes, patterns, or lapses in the literature that address the problems that prevent the Mauritanian fishing industry from developing and stabilizing.

The array of problems afflicting the Mauritania fishing industry stems from an assortment of legal, financial, operational, and environmental domains, each of which threatens the sector's viability and sustainability. Of all the obstacles that the industry must clear, perhaps the most

significant is the existing regulatory framework that governs the industry's operations. The Mauritania government has created a series of laws that appear to regulate fishing activities satisfactorily, but these laws suffer from weak enforcement mechanisms that allow unregulated fishing to proliferate. The legal framework further erodes from the pronounced lack of transparency that accompanies the issuance of fishing licenses and the monitoring of foreign vessels operating in Mauritania's Exclusive Economic Zone (EEZ). The severity of the situation is underscored by a recent authoritative examination of Mauritania's fishing activities from 2011 to 2016, which concluded that the industry is "threatened with collapse" (IMROP 2020). In the end, this thorough analysis produces not just one but several strategic recommendations that directly target the challenges uncovered. The methodology employed is especially beneficial because it facilitates a deep dive into historical and contemporary fishing industry issues while enabling a focused examination of specific challenges. That content analysis allows a synthesis of findings from various source types, which range from nearly two centuries of written history to almost daily current events. This study's breadth and depth practically ensures a comprehensive perspective on what problems might be encountered as we pursue a holistic understanding of this industry (Creswell & Poth, 2016).

This method not only guarantees that results are based on empirical evidence but also allows for the introduction of fresh, useful insights into the developing literature on Mauritania's fishing sector.

4. Results and Discussion

Findings from the study have generated a number of important findings about the numerous and complex problems confronting Mauritania's fishing industry. Inadequate regulation is identified as one of the industry's most serious problems. The investigation found that the laws intended to cover the fishing industry in Mauritania are outdated and that the enforcement of those laws is woefully inadequate. We determined that these deficiencies are leading to a number of serious problems in the fishing industry, including overfishing, illegal fishing, and poor management of fishery resources. Most of the fishing constituents we interviewed identified poor management of the fishing industry by the government as the primary challenge facing the sector. Poorly managed fishing not only poses a serious threat to the sustainability of fish stocks but also has serious potential consequences for the public revenue that fishing can generate.

The study also found another complication. Overall, the lack of investment in infrastructure most notably in two critical components of the fishing industry, which are modernized fishing fleets and advanced processing facilities has left the fishing sector in dire straits. At the same time, a lack of adequate financing for the small- and medium-sized businesses that make up a big part of the fishing industry also has constrained this sector's potential to innovate and to perform in a competitive manner in the international marketplace.

The research highlighted the increasing threat of environmental factors, such as climate changes, pollution, and habitat degradation, to fish stocks and marine biodiversity. The Mauritanian fishing industry has seemed not to notice. It is slow to adopt sustainable practices. Additionally, it exhibits a pronounced slowness in adapting to the rapidly evolving environmental conditions. The study's authors believe that the local industry is truly fishing on the verge of poverty. They blame overfishing by foreign fleets and insufficient local practices.

Taken together, these results highlight the complex mix of regulatory, financial, and environmental problems and the variety of ways in which they affect the fishing industry. The research also demonstrates the significant potential of the fishing industry to contribute to Mauritania's overall economic development.

5. Conclusion and Recommendations

Mauritania's fishing industry constitutes a significant economic pillar with substantial untapped potential. Nevertheless, the fishing sector faces numerous challenges that hinder its full development potential. These challenges certainly are multifaceted and complex, necessitating comprehensive solutions. They stem from a diverse and lengthy list of suspects that involves the legal, the financial, the operational, and the environmental. Unless the Mori government undertakes some thoroughgoing reforms in the fishing sector, the industry's growth and its long-term viability will be severely undermined.

Mauritania's fishing industry is endowed with remarkable potential that could enable it to make a substantial contribution to the country's overall development. Despite its relatively recent establishment in the early 1970s, this nascent industry presently challenged by several pressing problems. These problems first and foremost impede the industry itself and, second, negatively impact an important component of Mauritania's youth, its fishing workers. The first major problem is that a significant amount of illegal fishing happens in Mauritania's waters. To combat this effectively, the country must reform and strengthen the legal framework that governs the fishing industry.

Moreover, ensuring that the fishing sector's infrastructure especially its processing plants and cold storage facilities meets international standards is key to improving the industry's global competitiveness. On the financing front, the provision of sector-specific Islamic finance products could greatly assist the fishing sector's many small- and medium-sized enterprises. Meanwhile, any strategic development initiatives undertaken for the fishing sector should ensure that environmental sustainability is prioritized and addressed.

To comprehensively deal with these critical problems, Mauritania must translate exhortations international good governance into tangible actions. It needs to catch up on its decades-long shortfall of essential data so that it can implement science-based fisheries management. It needs to do this for both the fish stocks and the fishing communities, which, though economically important, have so far received scant attention from researchers.

To effectively navigate and surmount these formidable challenges, a series of strategic recommendations are put forth for consideration:

- i. It is highly advisable to reinforce regulatory enforcement measures with the objective of effectively combating illegal, unreported, and unregulated fishing practices. This strategic initiative should encompass the enhancement of monitoring and surveillance capabilities, as well as the imposition of increased penalties for any violations that occur.
- ii. A concerted effort must be made to improve infrastructure, with a particular emphasis on processing facilities and cold storage capacity. Substantial investment in contemporary technologies and the establishment of local processing industries could significantly elevate the value of fish exports while simultaneously generating additional employment opportunities.
- iii. There is an urgent need to broaden access to Islamic finance in order to provide crucial support for small and medium-sized enterprises within the fishing industry. This objective could be realized through the development of innovative financial products that are specifically tailored to address the distinct needs of this sector.
- iv. It is essential to actively promote sustainable fishing practices in order to safeguard marine resources for the benefit of future generations. This initiative should include the strict enforcement of catch limits, the protection of marine ecosystems, and significant investment

in research aimed at gaining a deeper understanding of the impact of climate change on fish stocks.

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