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Blockchain-based Finance in Emerging Markets: ICO Trends and Performance in the MENA Region

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Abstract

Despite growing global interest in Initial Coin Offerings (ICOs), few studies ex-amine ICOs in the Middle East and North Africa (MENA) region. This study an-alyzes ICO trends and performance in MENA from 2016 to 2020, identifying 153 ICOs across 11 countries. The UAE, Palestine, and Turkey dominated, account-ing for 90% of ICOs. Activity peaked in 2018, closely following Ethereum price trends, before declining. On average, 53% of ICO tokens were distributed public-ly, slightly above the global average (40-60%). UAE ICOs had the highest distri-bution (58%), while Palestine and Turkey averaged 49% and 52%, respectively. The average funds raised per ICO were $11.27M, with Palestine leading ($15.81M), $12.22M for UAE, and $1.85M for Turkey. MENA ICOs had a 47% success rate, with 53% failing. The UAE and Palestine emerged as key players in scale and performance. These findings provide insights for policymakers and fu-ture research on regional blockchain finance.

Keywords: *Initial Coin Offerings, Blockchain, Crowdfunding, ICOs Performance, Descrip-tive Analysis.*

Introduction

Background

Initial Coin Offerings (ICOs) have rapidly evolved into a transformative mechanism for raising capital, particularly in regions like the Middle East and North Africa (MENA), where technological innovation and economic diversification are pivotal. Leveraging blockchain technology, ICOs provide decentralized, scalable, and cryptographically secure platforms for funding ventures, enabling participants to exchange capital for tokens that hold utility or ownership value. These tokens can later be utilized for specific products or traded for fiat currency (Government-issued Currency), reflecting the growing appeal of ICOs in a digital-first economy (Gupta et al., 2020). In the MENA region, the combination of globalization, fintech advancements, and smart city initiatives has paved the way for ICOs to grow, aligning with broader economic plans and strategies to utilize blockchain technology for long-term development and sustainable growth. As illustrated in Fig. 1, ICOs operate at the core of blockchain crowdfunding, with tokens serving multiple purposes—ranging from utility and security to facilitating fiat currency exchanges—demonstrating their adaptability within a broader economic context. In the evolving landscape of crypto-assets, Ahmed (2024) highlighted two primary types emerge: utility tokens and security tokens. Utility tokens grant

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holders access to specific services and products within a dedicated ecosystem, often utilized in ICOs. Conversely, security tokens represent ownership rights in tangible or financial assets and are governed by existing securities regulations, offering investors potential returns through dividends or income derived from these assets. Understanding the distinctions and functions of these token types is crucial for exploring their roles in enhancing financial inclusion and facilitating investments in underserved markets.

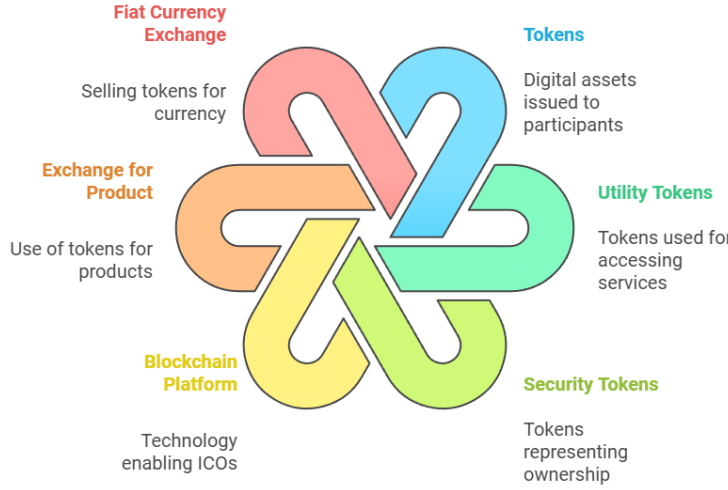
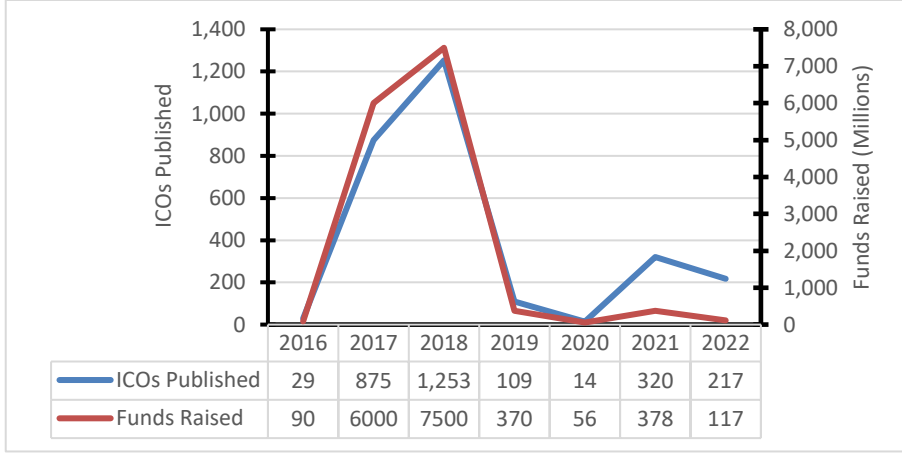


Fig. 1. Anatomy of an Initial Coin Offering (ICO).

ICOs began globally in 2013 (Sellitto, 2020), but their adoption in the MENA region started later, in late 2016. Over the years, ICOs gained popularity, enabling some investors to register consistent gains, with their peak activity occurring in 2017-2018, coinciding with the peak in Ethereum prices. As shown in Fig. 2, the number of ICOs published and the funds raised (in millions) grew significantly during this period, peaking in 2018 with over 1,253 ICOs published and $7.5 billion raised. However, both metrics experienced a sharp decline in subsequent years, with a minor recovery in 2021 followed by another decrease in 2022 (ICOBench, 2025).



	2016	2017	2018	2019	2020	2021	2022
ICOs Published	29	875	1,253	109	14	320	217
Funds Raised	90	6000	7500	370	56	378	117

Fig. 2. Trends in ICOs Published and Funds Raised (2016–2022).

The MENA region has a unique economic and regulatory environment that could shape the

dynamics of ICOs differently compared to other parts of the world. Countries within the region exhibit varying levels of technological advancement, regulatory frameworks, and cultural attitudes toward financial innovation. While some nations, such as the UAE and the Region of Palestine, have emerged as leaders in blockchain adoption, others lag behind due to infrastructural and regulatory challenges. This diverse landscape underscores the need for a focused examination of ICOs in the MENA region to understand their adoption patterns, performance, and potential impact on local economies.

Theoretical Foundations and Theories of ICOs

The rise of ICOs as an innovative financing tool has prompted significant scholarly interest in understanding the mechanisms behind their success and failure. Unlike traditional equity financing, ICOs operate within decentralized, opaque, and often underregulated ecosystems, necessitating a multidisciplinary theoretical lens. This subsection outlines the key theories that frame ICOs, with a focus on their implications for emerging markets such as the MENA region. Understanding the complex dynamics of Initial Coin Offerings (ICOs) requires a strong theoretical foundation. To this end, this section synthesizes crucial theoretical frameworks that have been instrumental in ICO research, encompassing signaling theory, agency theory, the unique challenges of information asymmetry and token-based signaling, general systems theory, the contributions of social capital and organizational legitimacy, pertinent behavioral and contextual theories, and established phase-based conceptual models. The most relevant foundational theories for ICOs are summarized and illustrated in Fig. 3.

1. Signaling Theory

Signaling theory (Spence, 1973) is foundational in ICO literature due to the inherent information asymmetry between project founders and investors. ICOs, often launched by early-stage ventures with minimal operational history, must rely on credible signals—such as detailed whitepapers, experienced founding teams, transparent tokenomics, and social media engagement—to convey legitimacy and project quality (Fisch, 2019; Chitsazan et al., 2022). These signals become particularly critical in MENA, where regulatory clarity may be lacking, and investor trust is still growing. High-quality signaling mechanisms can bridge credibility gaps, attract cross-border investment, and reduce adverse selection.

2. Agency Theory

Agency theory (Jensen and Meckling, 1976) addresses principal-agent conflicts that arise when the interests of founders (agents) diverge from those of investors (principals). In ICO settings, this conflict manifests through risks of fund misuse, underperformance, or founder exit post-funding (Chod and Lyandres, 2021). Governance structures such as smart contracts, founder token lock-ups, and milestone-based fund releases are designed to prevent founders from misusing investor funds or abandoning the project after fundraising. These mechanisms are especially relevant in regions like MENA, where legal recourse for investors may be limited.

3. Information Asymmetry and Token-Based Signaling

Closely linked to signaling and agency theories is the broader concept of information asymmetry. ICO markets often suffer from high degrees of information disparity, making investors vulnerable to misleading claims. Entrepreneurs may address this by retaining significant portions of tokens as a signal of commitment, which is more feasible in token-based financing than traditional equity (Chod and Lyandres, 2021). In moderately asymmetric

environments such as those in MENA, these mechanisms serve as critical tools to reduce uncertainty and establish initial trust.

4. General Systems Theory (GST)

General Systems Theory offers a macro-level view, positioning ICOs as open systems that interact dynamically with stakeholders, regulatory environments, and market conditions. This framework emphasizes feedback loops and environmental adaptation, particularly relevant to blockchain ventures that must continuously adjust strategies based on investor sentiment, regulatory shifts, and platform feedback (Campino et al., 2022). In MENA's fluid fintech ecosystem, this systemic adaptability is essential for ICO resilience and scalability.

5. Social Capital and Organizational Legitimacy

Social Capital Theory highlights the role of community engagement and relational trust in ICO performance. Social media activity, influencer endorsements, and developer community support function as social proof, enhancing visibility and credibility (Campino et al., 2022). In parallel, Organizational Legitimacy Theory posits that aligning with legal standards, Know Your Customer (KYC) protocols, and reputable advisors helps legitimize ICOs, especially in unregulated or evolving regions like MENA (Chitsazan et al., 2022).

6. Behavioral and Contextual Theories

Investor behavior in ICOs is often influenced by cognitive biases, such as herd behavior, overconfidence, and Fear Of Missing Out (FOMO), which behavioral finance theories help explain (Kahneman and Tversky, 1979). Information systems theory complements this by examining how digital signals—e.g., website quality, GitHub activity, or exchange listings—affect perception and decision-making (Chitsazan et al., 2022). These insights are particularly relevant in digitally active MENA markets, where online behavior is a key determinant of fundraising success.

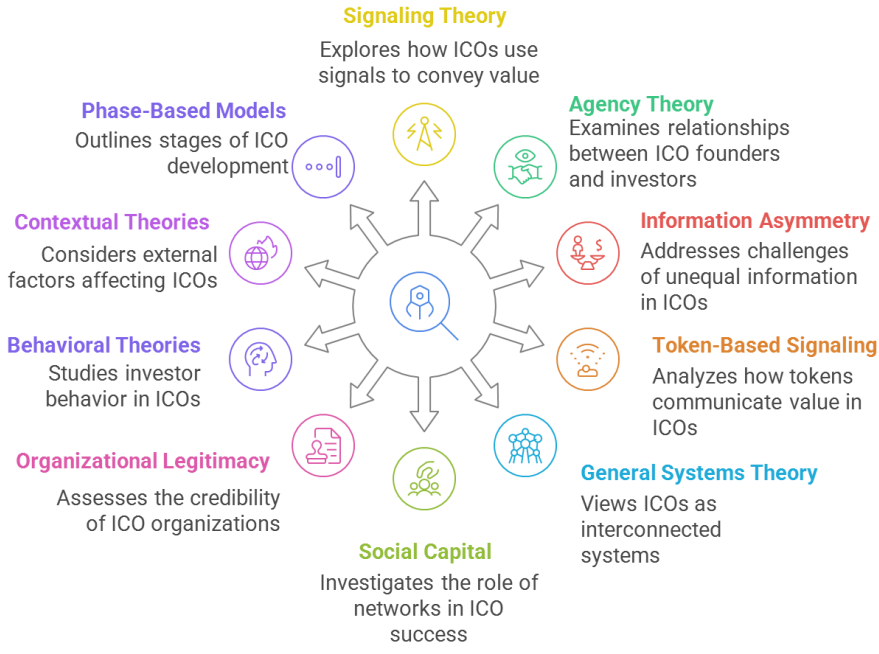


Fig. 3. Theoretical Frameworks in ICO Research.

7. Phase-Based Conceptual Frameworks

Lastly, the ICO process is increasingly studied through a phase-based lens that distinguishes pre-launch, launch, and post-launch stages. Each phase involves different success determinants—from whitepaper clarity and marketing strategies to post-ICO liquidity and platform delivery (Chitsazan et al., 2022). This model is particularly valuable in MENA, where contextual nuances—such as regulatory progress and fintech adoption—may influence outcomes at each stage of the ICO lifecycle.

Related Work

Despite the growing global interest in ICOs, existing studies predominantly focus on broader international trends, with limited attention to the MENA region's unique characteristics. This gap in the literature motivates the current study, which aims to provide a descriptive analysis of ICOs in the MENA region. By examining local market conditions, investor behavior, and regulatory challenges, this study contributes to a more nuanced understanding of ICOs within this underexplored geographical context, offering actionable insights for policymakers, entrepreneurs, and investors.

The global emergence of ICOs has sparked significant academic and practical interest, with numerous studies examining their technological, financial, and regulatory aspects. Sellitto (2020) provided a foundational analysis of ICOs worldwide, exploring their underlying technologies, market dynamics, and regulatory frameworks. The study highlighted key factors influencing ICO success, including token pricing trends, white-listing procedures, and the role of Know-Your-Customer (KYC) compliance. However, while this research offered valuable insights into global ICO practices, it does not address regional variations that may influence their implementation and outcomes. Similarly, Huang et al. (2020) conducted a comprehensive

analysis of the geographical distribution of ICOs across 187 countries, emphasizing the role of developed financial systems, advanced digital technologies, and supportive regulatory environments in fostering ICO activity. Their findings underscore the importance of contextual factors in determining ICO success, yet they also reveal a notable gap in empirical research concerning specific regions, particularly the MENA region. This lack of targeted analysis leaves a void in understanding how unique cultural, economic, and regulatory factors influence ICOs in emerging markets. Gupta et al. (2020) provided a detailed descriptive analysis of ICOs in the United States, focusing on token pricing, due diligence practices, and the impact of incentive programs. The study demonstrated that the presence of KYC and white-list procedures correlates with higher expert ratings and increased social media engagement. However, incentive programs yielded mixed results in terms of their influence on expert ratings and social media following. While these findings offer valuable lessons for ICO practices globally, they fail to account for the distinct conditions present in the MENA region, further highlighting the need for region-specific research.

The MENA region has witnessed a gradual adoption of blockchain technology, driven by its potential to transform financial systems and enable economic growth. Ghazawneh (2019) provided a foundational understanding of the challenges and opportunities associated with blockchain adoption in the region, identifying critical factors such as regulation, education, collaboration, and culture. While this study laid the groundwork for exploring blockchain applications in the MENA region, it did not delve into specific use cases such as ICOs. Grossman (2022) offered a comprehensive overview of blockchain adoption across MENA countries, highlighting significant advancements in nations such as Israel (so called "the Region of Palestine" in this research), Bahrain, Saudi Arabia, and the UAE. The study emphasized the potential of blockchain to facilitate regional integration and economic growth, while also pointing out substantial digital divides and uneven development levels across the region. Despite the promising landscape for blockchain technology, the study's focus on general adoption trends leaves the dynamics of ICOs unexplored.

In the context of Islamic finance, Ali et al. (2019) examined the integration of blockchain and fintech solutions into Shariah-compliant financial services. The study highlighted the transformative potential of blockchain in enhancing transparency and efficiency within Islamic finance, while also identifying opportunities for ICOs to address funding gaps in this sector. However, the limited empirical analysis of ICOs within the Islamic finance framework underscores the need for further research in this area.

Despite the global growth of ICOs, studies addressing their adoption and performance in the MENA region remain scarce. Allen (2021) discussed the globalization of finance and fintech in the MENA region, emphasizing the transformative role of ICOs in financing startups, particularly in high-income countries. However, the study lacked empirical data on the operational dynamics and regulatory challenges specific to ICOs in the region. Naz (2024) explored the intersection of blockchain and Islamic finance, using case studies from Malaysia and Saudi Arabia to illustrate the technology's potential to address traditional inefficiencies. While this research provided valuable insights into blockchain applications, it did not examine ICOs as a specific fundraising mechanism within the MENA context. This gap is particularly significant given the region's growing interest in blockchain and fintech solutions.

Research Gap and Contribution

The existing literature reveals a growing body of research on blockchain and ICOs globally but

highlights a notable lack of studies focusing on the MENA region. While blockchain adoption and financial innovation in the MENA region have been explored in broader contexts, specific research on ICOs within this region remains sparse. This gap is particularly significant given the region's unique regulatory, cultural, and economic dynamics, which likely influence ICO implementation and success differently than in other parts of the world.

This study addresses the gap in ICO research by analyzing their dynamics in the MENA region, a geography that remains underexplored despite its growing blockchain adoption and economic potential. The research contributes to the state-of-the-art by offering a descriptive and performance analysis of ICOs in 20 MENA countries from 2016 to 2020. The study identifies critical trends, such as the regional success rate of ICOs, comparisons with global benchmarks, and variations in ICO performance across countries with differing levels of infrastructural and regulatory maturity. Notably, the research highlights the dominance of UAE, Palestine, and Turkey in ICO activity and performance, highlighting these countries as emerging hubs for blockchain innovation.

These findings provide actionable insights for policymakers seeking to create more ICO-friendly environments and for foreign investors exploring opportunities in well-equipped and mature markets. By shedding light on the unique characteristics and challenges of ICOs in the MENA region, this study enhances the understanding of regional trends and informs future research and decision-making in this evolving financial domain.

Paper Structure

The remainder of this paper is organized as follows: Section 2 details the dataset employed in this study. Section 3 presents the descriptive analysis conducted in this study. Section 4 outlines the key findings and offers practical recommendations. Lastly, Section 5 provides the concluding remarks for this study.

Data

This study utilizes data originally collected and published by Paul Momtaz (2020), whose work provides a comprehensive examination of the ICO market. While interest in ICOs has surged, particularly in regions such as MENA, there remains a significant lack of empirical research specifically focused on this area. Most existing studies, including Momtaz's, primarily address broader trends in the ICO market without delving into regional variations. This gap presents a valuable opportunity for further exploration, motivating the current study to conduct a descriptive analysis of ICOs within the MENA region.

To align with the study's focus on ICOs in the MENA region, a filtering process was applied to the original dataset, which included 6,440 ICOs globally. The first step in data processing involved filtering ICOs based on their country of origin, selecting only those from the MENA region. After this filtering process, 153 ICOs from the MENA region were identified. Notably, only 11 countries within MENA had active ICOs during the study period.

To ensure the accuracy and validity of the dataset, each ICO was examined by visiting the associated links provided in the dataset, including white paper URLs, LinkedIn profiles, GitHub repositories, and official websites. This step enabled a thorough validation of the projects, confirming their authenticity and operational status.

Additionally, to assess the success, failure, or potential scam status of each ICO, further verification was carried out using three widely recognized ICO evaluation platforms: ICOBench,

ICOHolder and FoundICO. These platforms provide insights into the current status of ICOs, allowing for the classification of projects based on their progress, completion, or discontinuation.

The final dataset, comprising 153 ICOs from 11 MENA countries, serves as the foundation for the analysis presented in this study. It provides an in-depth exploration of key trends related to the number, size, and success rates of ICOs across the region, offering valuable insights into the evolving landscape of blockchain-based fundraising in MENA.

Descriptive Analysis

We present a descriptive analysis of ICOs in MENA region in terms of seven key characteristics as follows.

ICOs' Geography in MENA Region

In this subsection, the distribution of ICOs among MENA region countries is analyzed. Furthermore, the top three countries with the highest number of ICOs in MENA region are identified. Moreover, it is humbly analyzed why ICOs occurs more frequently in some countries with respect to others.

First of all, "country" represents the country where the ICO has been issued. The most represented countries are the United Arab Emirates (UAE), the Region of Palestine, and Turkey, accounted for 90% of all ICOs in MENA region, where 73, 40, and 26 ICOs projects have been issued, respectively. Fig. 4 maps countries by the number of ICOs. Furthermore, Fig. 5 and Table 1 show the distribution of ICOs per country in the MENA region between 2016 and 2022.

This analysis reveals that ICOs in MENA region is intensively take place in the UAE, the Region of Palestine, and Turkey. This finding does make sense as those three countries are leading countries in the MENA regions when it comes to economics, regulations, and technology. Actually, this finding is aligned with conclusions of Huang et al. (2020), that ICOs occur more frequently in countries where the Information and Communication Technology (ICT) is more advanced; moreover, ICOs occur more frequently in countries with more developed digital regulation environment; furthermore, ICOs diffusion requires availability of investment-based crowdfunding platforms which are essential for the financing of ventures. Those pillars are well established in the top three countries in the MENA region. Thus, those three countries are most likely to have an ICO-friendly environment.

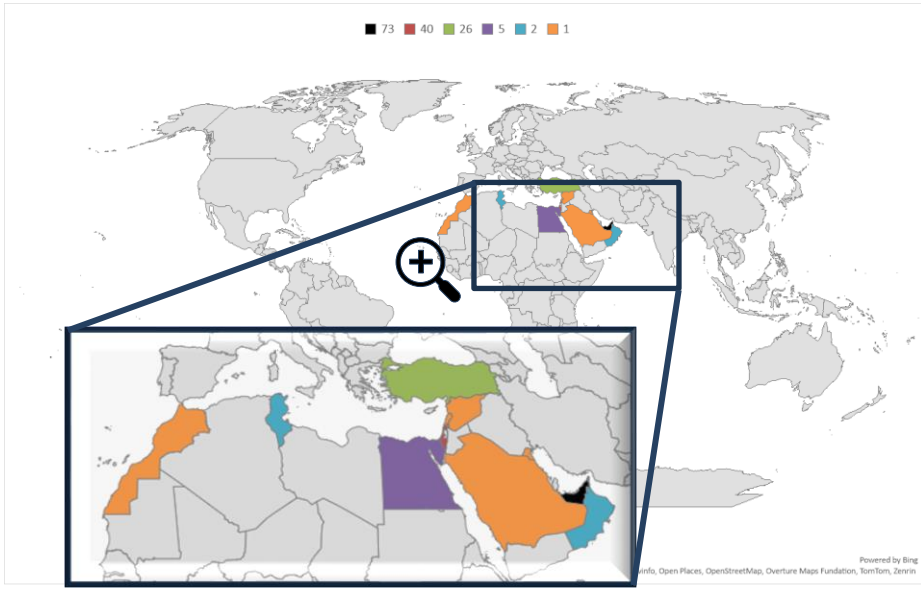


Fig. 4. Map Of the MENA Region With the Number of Icos Per Country.

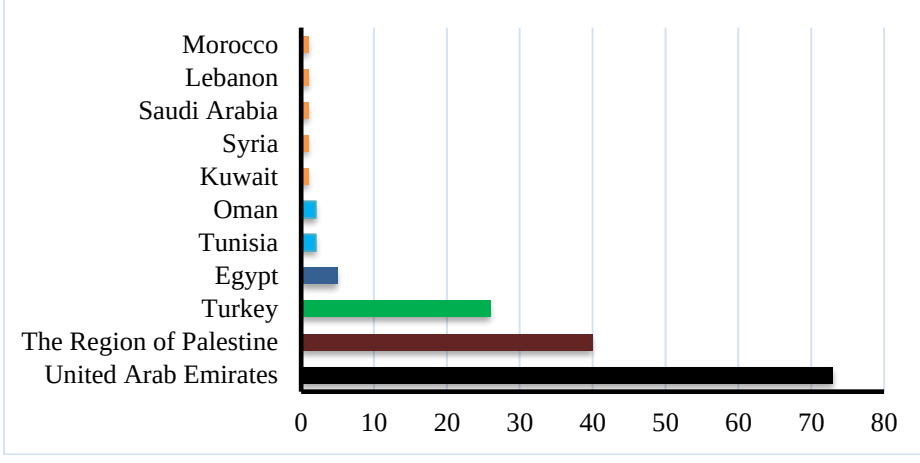


Fig. 5. Distribution of the number of ICOs per country.

Country	Number of ICOs	Percentage	Cumulative Percentage
United Arab Emirates	73	47.7	47.7
The Region of Palestine	40	26.1	73.9
Turkey	26	17.0	90.8
Egypt	5	3.3	94.1
Tunisia	2	1.3	95.4
Oman	2	1.3	96.7
Kuwait	1	0.7	97.4
Syria	1	0.7	98.0
Saudi Arabia	1	0.7	98.7
Lebanon	1	0.7	99.3
Morocco	1	0.7	100.0
TOTAL	153		

Table 1. Distribution of ICOs Among Countries.

Country-based Fundraising Amounts Analysis

This subsection examines the diffusion of Initial Coin Offerings (ICOs) in the MENA region, focusing on the "amount raised," which represents the total funds collected by a company during crowdfunding periods across different phases. The currency used for reporting is the United States Dollar ($). Among the MENA region, the UAE leads in ICO diffusion, raising a total of $366.6 million, followed by the Region of Palestine with $221.3 million. Turkey ranks third with $14.8 million, while Morocco ($3.0 million) and Egypt ($2.9 million) have received comparatively minimal amounts.

Table 2 provides a detailed breakdown of total and average monetary amounts distributed among these countries, highlighting significant disparities. The UAE secured the largest total funding, amounting to $366,640,698, with an average allocation of $12,221,357. The Region of Palestine follows with $221,341,313, and a higher average allocation of $15,810,094. Turkey received $14,825,582, with a lower average of $1,853,198. Morocco and Egypt had the smallest total amounts, $3,000,000 and $2,877,240, respectively, each corresponding to single allocations. This data underscores the variability in funding levels and allocation patterns across the region.

Fig. 6 further illustrates the distribution of these funds, revealing the UAE as the dominant recipient with 60% of the total funding. The Region of Palestine accounts for 36%, representing another substantial portion. In contrast, Turkey and other regions together account for only 4% of the total funds, with Turkey receiving 3% and other regions merely 1%. The chart underscores the concentration of funding in the UAE and the Region of Palestine, which collectively absorb 96% of the total allocation, leaving only a marginal share for the remaining countries. This visualization highlights the highly uneven distribution of ICO funding within the MENA region.

Country	Total Amounts ($)	Average Amounts ($)
United Arab Emirates	366,640,698	12,221,357
The Region of Palestine	221,341,313	15,810,094
Turkey	14,825,582	1,853,198
Morocco	3,000,000	3,000,000
Egypt	2,877,240	2,877,240

Table 2. Fundraising Amounts Among Countries.

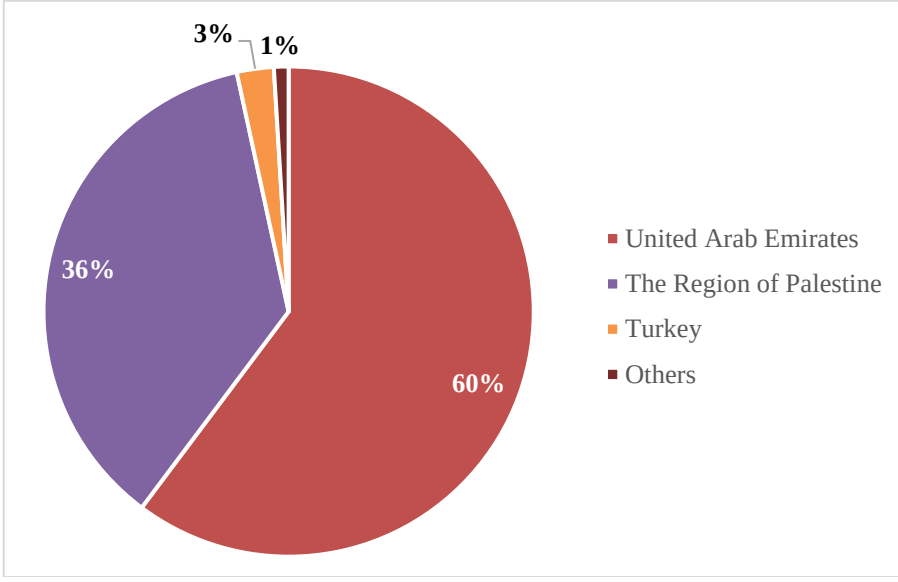


Fig. 6. Distribution of the Fundraising Amounts of Icos Per Country.

Country-Yearly-based ICOs Analysis

This subsection reports the number of ICOs per year for the most dominant three countries in the MENA region. Fig. 7 illustrates the number of ICOs recorded annually from 2016 to 2020 in the three dominant countries: the UAE, the Region of Palestine, and Turkey.

From 2016 to 2020, the UAE consistently had the highest number of ICOs compared to the other two countries, peaking in 2018 with 42 ICOs. The Region of Palestine exhibited moderate activity, with its ICOs increasing from 1 in 2016 to a peak of 20 in 2018, followed by a decline to 5 in 2019 and 1 in 2020. Turkey displayed the least activity in 2016 (0 ICOs) but showed a gradual increase, peaking at 11 ICOs in 2018 and declining thereafter.

The year 2018 marked the peak ICO activity globally, MENA region, and across the dominant three countries, as well, with a combined total of 73 ICOs. The decline in ICO activity post-2018 is evident in all three countries, with significant reductions observed in 2019 and 2020. Overall, the UAE exhibited the most consistent and significant contribution to the total number of ICOs, while Turkey and the Region of Palestine contributed to a lesser extent.

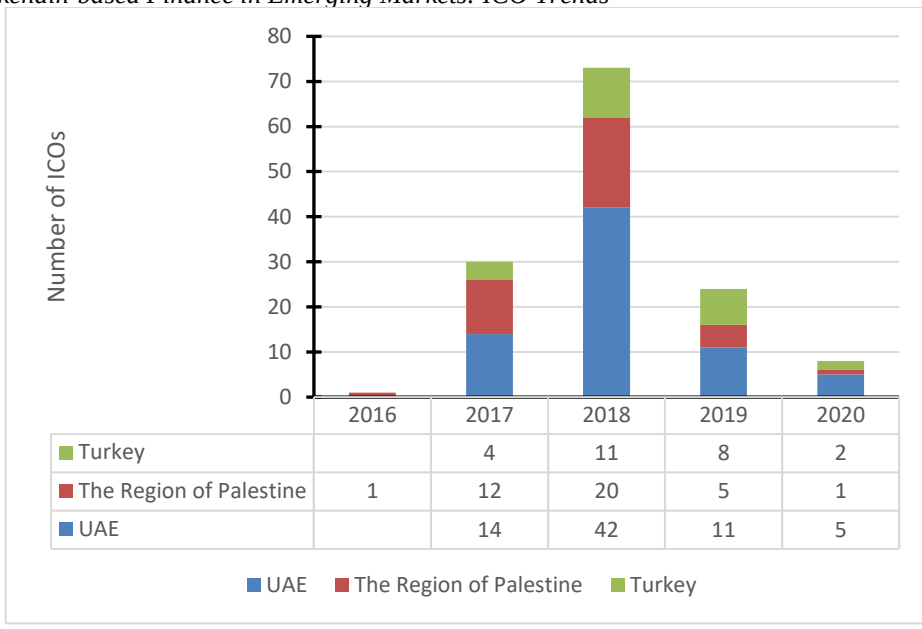


Fig. 7. Distribution of the Number of Icos Per Country in Yearly Basis.

Token Supply and Distribution Analysis

Token supply is one of the most critical features for ICOs, that represent the total number of tokens released for the token offering (Token for Sale). Another important measure is the percentage of tokens distributed in ICO and not retained, that can be called "Percent Distributed." This subsection analyzes those two important figures for ICOs in MENA region. It is important to note that ICOs without recorded "Token for Sale" and/or "Percent Distributed" are omitted from this analysis. This might explain the differences between the number of ICOs reported in Table 1 and Table 3.

Table 3 highlights the number of ICOs conducted in each country, the total number of tokens issued, and the average tokens issued per ICO in the MENA region. The results indicate significant disparities in ICO activity across the region, with certain countries emerging as dominant players while others exhibit minimal participation. The light-blue highlighted countries represent the most dominate countries, with the highest number of ICOs, specifically the UAE, the Region of Palestine, and Turkey. The "Overall" row aggregates these figures to provide a regional summary, where the overall average number of tokens offered per ICO is 35.76 billion.

The UAE and the Region of Palestine account for the majority of ICO activity in the MENA region. The UAE leads in both the number of ICOs (62), and total tokens issued (3.04 trillion), with an average of 49.1 billion tokens per ICO. Similarly, the Region of Palestine has conducted 25 ICOs, issuing a total of 1.25 trillion tokens, with a slightly higher per-ICO average of 50.01 billion tokens. These figures suggest that these two regions have more developed blockchain ecosystems, potentially benefiting from regulatory support, investor confidence, and technological infrastructure.

Turkey represents a mid-tier player in the regional ICO landscape, with 23 ICOs and a total of 16.9 billion tokens issued. However, the average number of tokens for sale per ICO in Turkey

(732.9 million tokens) is significantly lower than in the UAE and the Region of Palestine, indicating a trend toward smaller-scale ICOs. This discrepancy suggests differences in market size, regulatory frameworks, or investor appetite between Turkey and the leading countries.

Beyond these three primary ICO hubs, other MENA countries exhibit minimal ICO activity, with only one to four ICOs recorded per country. Tunisia stands out among this group, with 50.1 billion tokens issued across two ICOs, resulting in an average of 25.05 billion tokens per ICO. This suggests that although Tunisia has a lower number of ICOs, those conducted are relatively large in scale. Syria, despite hosting only a single ICO, issued 5 billion tokens, which is still a considerable amount compared to other low-activity nations.

In contrast, Kuwait, Egypt, Saudi Arabia, Oman, and Morocco show significantly lower ICO participation, both in terms of the number of ICOs and the total tokens issued. Kuwait's single ICO issued 224 million tokens, while Egypt's four ICOs collectively resulted in 379.4 million tokens, averaging 94.85 million tokens per ICO. Meanwhile, Saudi Arabia, Oman, and Morocco have issued only a few million tokens per ICO, suggesting that these markets are still in the early stages of ICO adoption or face regulatory and infrastructural constraints that limit large-scale participation.

Country	Number of ICOs*	Token for Sale	Average of "Token for Sale"
United Arab Emirates	62	3,040,000,000,000	49,100,000,000
The Region of Palestine	25	1,250,200,000,000	50,008,046,000
Turkey	23	16,900,000,000	732,885,221
Tunisia	2	50,100,000,000	25,050,000,000
Syria	1	5,000,000,000	5,000,000,000
Kuwait	1	224,000,000	224,000,000
Egypt	4	379,407,016	94,851,754
Saudi Arabia	1	9,900,000	9,900,000
Oman	2	15,890,000	7,945,000
Morocco	1	3,000,000	3,000,000
OVERALL	122	4,362,832,197,016	35,760,919,648

Table 3. Distribution of Average "Token For Sale" Among Countries.

*Only ICOs with recorded "Token for Supply" is considered in this table.

The token distribution of ICOs is a crucial measure for ICO success. Analyzing the percentage of tokens distributed per ICO provides valuable insights into regional trends and highlights variations influenced by market conditions. This section examines the distribution patterns of ICOs across various MENA countries, focusing on overall trends, variations across different markets, and comparisons with global benchmarks.

Fig. 8 illustrates the distribution of tokens as a percentage of the total supply for ICOs across various MENA countries. It presents the average percentage of tokens distributed per ICO for each country. The distribution trends reveal notable variations across the region, primarily influenced by the number of ICOs in each country. Countries with a higher number of ICOs exhibit greater variability, whereas those with a single ICO have no variation, as all three values

(minimum, average, and maximum) are the same.

The overall trend suggests that most ICOs allocate between 40% and 70% of their tokens to investors, with some exceptions where distribution reaches extremely high or low values. Countries with a larger number of ICOs, such as the United Arab Emirates and the Region of Palestine, display high variability, indicating a mix of conservative and aggressive token distribution models. In contrast, countries with fewer ICOs tend to show more consistent patterns, as they are influenced by a smaller sample of projects.

When comparing the overall average token distribution in the MENA region to the global benchmark of 40-60%, it is evident that MENA ICOs generally align with international practices. The observed averages in the region mostly fall within or slightly above this global range, suggesting that MENA-based ICOs adopt similar token distribution strategies to their global counterparts.

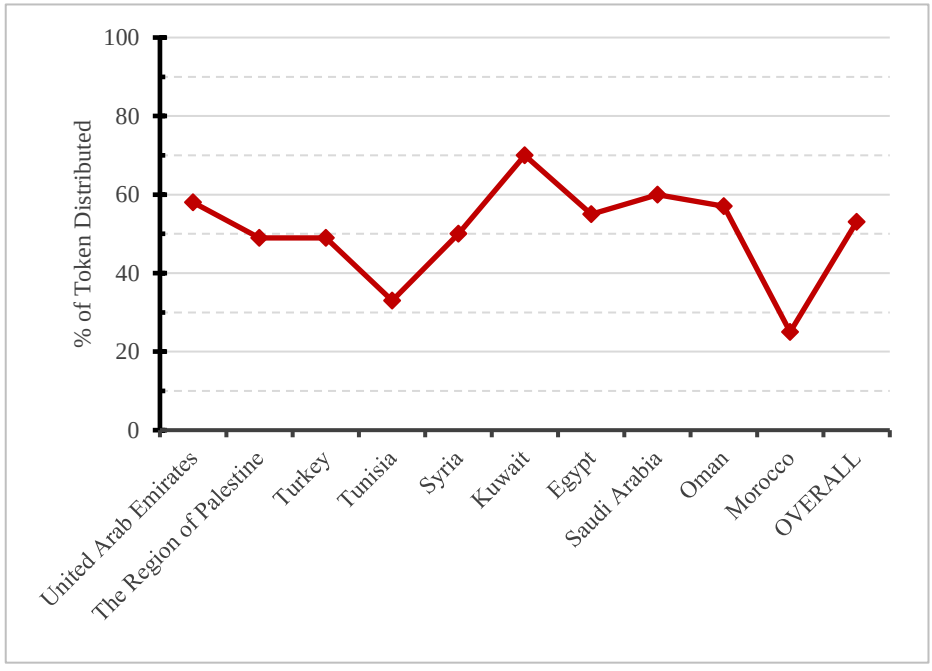


Fig. 8. Distribution Of "% Of Token Distributed" Of Icos Per Country in MENA Region.

Success-Failure Analysis of ICOs

In this subsection, we assessed the success or failure of ICOs by systematically analyzing data from three major ICO listing platforms: FoundICO, ICOBench, and ICOHolder. Additionally, we cross-referenced the collected fundraising data with the original dataset provided by Momtaz (2020) to ensure accuracy and consistency. The classification of each ICO was determined based on the reported fundraising outcomes. Specifically, an ICO was classified as **Successful** if it reached or exceeded its stated soft cap, hard cap, or fundraising goal. If an ICO raised funds but did not meet its soft or hard cap, it was classified as **Partially Successful**.

Conversely, an ICO was considered **Failed** if it was not listed on any of the three examined platforms or if there was no available record of its fundraising performance from either the platforms or the dataset by Momtaz (2020). It is important to note that this study does not

explicitly categorize ICOs as scams or spam due to the lack of conclusive evidence to support such classifications. As a result, potential fraudulent ICOs remain within the broader category of failed projects. This classification framework provides a structured approach to evaluating ICO performance while acknowledging the limitations of available data in distinguishing between legitimate and deceptive ventures. Fig. 9 illustrates the classification of ICOs based on their fundraising outcomes. The three categories identified are Successful, Partially Successful, and Failed ICOs, represented in green, blue, and red, respectively.

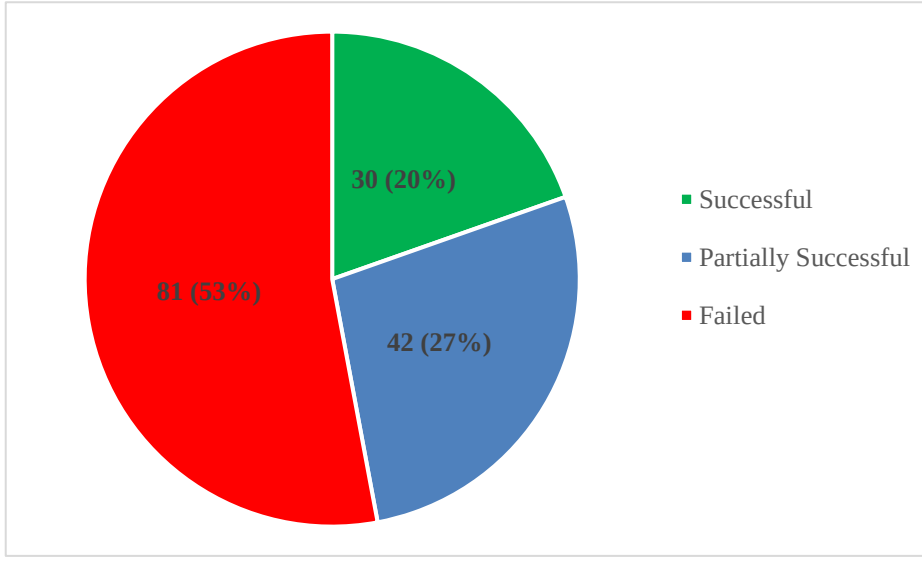


Fig. 9. Distribution Of ICO Success, Partial Success, And Failure Rates in MENA Region.

From the chart, 53% (81 out of 153 ICOs) failed, indicating that more than half of the ICOs did not meet their fundraising goals or lacked sufficient data to confirm their financial success. This high failure rate suggests significant challenges within the ICO market in MENA region, such as investor skepticism, lack of transparency, regulatory issues, or weak project fundamentals.

Moreover, 27% (42 out of 153 ICOs) were partially successful, meaning that while these projects raised some funds, they did not meet their soft or hard cap goals. This category represents ICOs that gained partial investor support but may have struggled due to inadequate marketing, poor timing, or insufficient backing from the crypto community.

Finally, only 20% (30 out of 153 ICOs) were classified as successful, having met or exceeded their soft cap, hard cap, or overall fundraising objectives. This relatively low success rate highlights the difficulty of launching a fully funded and viable ICO, emphasizing the competitive and uncertain nature of the blockchain investment landscape in the MENA region.

Discussion

The findings of this study provide a comprehensive understanding of the ICO landscape in the MENA region, shedding light on its unique characteristics, challenges, and opportunities. By analyzing ICO activity across 11 countries between 2016 and 2020, this study bridges a significant research gap and offers insights relevant to both academics and practitioners.

This study reveals that ICO activity in the MENA region is highly concentrated in the UAE, the

Region of Palestine, and Turkey, which together account for 90% of all ICOs and 96% of total funds raised. These countries benefit from advanced ICT infrastructure, favorable regulatory environments, and strong crowdfunding ecosystems, which align with global research on ICO success factors. Despite this concentration, the overall success rate of MENA ICOs remains low, with only 20% classified as successful, 27% as partially successful, and 53% as failed, indicating significant barriers to ICO viability in the region.

When compared to global ICO trends, MENA's 20% success rate appears higher than ICOBench's reported 10% success rate in 2019 but lower than earlier estimates from 2017, where around 46% of ICOs failed. The 53% failure rate in MENA aligns with global challenges such as investor skepticism, regulatory uncertainty, and project credibility issues. However, the region also faces specific constraints, including limited investor awareness and inconsistent regulatory frameworks. Notably, the UAE and the Region of Palestine outperform other MENA countries, reinforcing the role of strong blockchain ecosystems and regulatory clarity in improving ICO outcomes.

To enhance ICO success, MENA policymakers should establish clearer regulatory frameworks, encourage transparency, and develop investor protection mechanisms to increase confidence in blockchain investments. Additionally, fostering regional investment networks and strengthening blockchain-based financial infrastructure could help emerging markets within MENA attract more viable ICO projects. Given that Islamic finance principles significantly influence investment decisions in the region, integrating Shariah-compliant frameworks into ICO regulations could increase investor confidence. Aligning ICOs with Islamic finance guidelines can attract a larger pool of Muslim investors while reinforcing ethical financial practices. In light of the Islamic perspectives on ICOs, the study by Ahmed (2024) provided a critical examination of their implications in the context of Shariah compliance. The study explored how ICOs can serve as a financing mechanism for small and medium enterprises (SMEs) while adhering to Islamic financial principles. It emphasizes the potential of Shariah-compliant security tokens, derived from ICOs, to offer alternative investment opportunities that align with ethical guidelines within Islamic finance. Moreover, the author discusses the broader implications of integrating ICOs with Islamic financial practices, addressing concerns related to risk, uncertainty, and compliance that are essential for regulatory considerations. By grounding the analysis in Islamic jurisprudence, this paper contributes to the understanding of how ICOs can be structured to meet the requirements of Shariah law, thereby revealing their potential role in fostering economic growth in Muslim communities.

Moreover, and as highlighted by Altwijry et al. (2022), the collaboration between Islamic banks and FinTech companies can enhance efficiency and expand customer outreach while adhering to Shariah principles. However, the rise of ICOs necessitates careful consideration of their compliance with Islamic finance tenets, particularly concerning concepts such as risk-sharing and the prohibition of Riba. Therefore, while ICOs may offer innovative avenues for capital mobilization, it is crucial for stakeholders in the MENA region to rigorously evaluate their implications and develop robust guidelines to preserve the ethical foundations of Islamic finance.

Furthermore, and as highlighted in the bibliometric analysis of Islamic finance literature (Yihua et al., 2022), ICOs can potentially serve as a viable funding mechanism for startups, promoting economic development and financial inclusion. However, the alignment of ICOs with Shariah compliance remains a critical concern. Unlike conventional fundraising methods, ICOs must navigate the complexities of ensuring that underlying projects adhere to Islamic ethical

standards, which prioritize transparency and avoid speculative risk. Furthermore, challenges such as regulatory uncertainty and public skepticism, as described in the ongoing discourse on Fintech adoption (Yihua et al., 2022), could hinder the integration of ICOs into the mainstream financial landscape. Future research should focus on assessing how these offerings can be structured to meet Islamic finance requirements while also contributing to the region's economic growth, thereby enriching the ongoing dialogue on the intersection of technology and responsible finance.

Conclusion

This study provides a comprehensive analysis of Initial Coin Offerings (ICOs) in the Middle East and North Africa (MENA) region, addressing a significant gap in literature. Through the examination of 153 ICOs across 11 MENA countries from 2016 to 2020, the research reveals critical trends regarding the number, size, and success of ICOs in the region. The findings highlight the dominant roles played by the United Arab Emirates (UAE), the region of Palestine, and Turkey, which together accounted for 90% of ICO activity. These countries also exhibited higher distribution rates and larger fundraising amounts compared to other MENA nations. Despite these successes, the overall success rate of ICOs in the region remains modest, with 47% of ICOs being successful or partially successful, while the remaining 53% failed.

This research contributes valuable insights into the ICO landscape in MENA, emphasizing the need for tailored regulatory frameworks and supportive environments to foster further blockchain innovation. Policymakers and investors can draw on these findings to identify opportunities and challenges within the region. Future research can expand upon this study by investigating the impact of local regulations, cultural factors, and infrastructure maturity on ICO outcomes, providing a deeper understanding of the regional dynamics influencing the blockchain space. Given the influence of Islamic finance principles in the region, integrating Shariah-compliant frameworks into ICO regulations could not only increase investor confidence but also attract a larger pool of Muslim investors. Aligning ICOs with Islamic finance guidelines could reinforce ethical financial practices while expanding the region's access to global blockchain investment opportunities. Future work will extend this study by utilizing a more recent and updated ICO dataset and conducting a comparative analysis between the MENA region and other regions (e.g., Europe, North America, Southeast Asia).

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