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The Palgrave Handbook of Fintech in Africa and Middle East

Connecting the Dots of a Rapidly Emerging Ecosystem

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The Palgrave Handbook of Fintech in Africa and Middle East

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With 131 Figures and 113 Tables

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May this book serve as a catalyst for financial inclusion, economic empowerment, technological innovation, and the democratization of financial services across Africa and the Middle East. We dedicate this pioneering reference on fintech and financial technology to the entrepreneurs, innovators, policymakers, and communities working to build a more inclusive, transparent, and prosperous financial future for all.

Foreword

The fintech revolution is transforming economies and societies across the globe, and few regions reflect this dynamic change as vividly as the Middle East and Africa (MEA). With a unique combination of youthful demographics, high mobile penetration, unbanked populations, and a growing appetite for digital solutions, MEA has emerged as a vibrant frontier for fintech innovation.

This *Handbook of Fintech in Africa and Middle East* arrives at a critical moment. Across the region, governments, regulators, entrepreneurs, and investors are working in concert to accelerate financial inclusion, enable seamless digital payments, and foster cross-border collaboration. From the bustling fintech hubs of Dubai, Riyadh, and Cairo, to the rising digital economies of Lagos, Nairobi, and Cape Town, MEA is witnessing a wave of transformative initiatives that are redefining financial services.

The chapters of this handbook capture the diversity and depth of the fintech landscape in the region. It explores key areas such as payments, digital banking, blockchain, insurtech, and regtech, while also shedding light on unique regional challenges—from regulatory harmonization to cybersecurity and data privacy. Most importantly, it showcases success stories of homegrown fintechs that are creating inclusive, scalable solutions, often leapfrogging traditional financial infrastructures.

For policymakers, industry leaders, academics, and entrepreneurs alike, this handbook serves as both a guide and an inspiration. It offers a comprehensive overview of the sector's evolution, current trends, and future potential, while providing practical insights into how fintech can drive inclusive growth and sustainable development in MEA.

As the region continues to embrace digital transformation, the role of fintech in shaping the financial future of millions cannot be overstated. We hope this handbook will contribute to deepening understanding, encouraging innovation, and fostering collaboration among stakeholders committed to building an inclusive, efficient, and resilient financial ecosystem.

Welcome to the future of finance in the Middle East and Africa.

Preface

The term fintech covers financial technology products, financial technologies, and new entities (startups) with new business models. The evolution of fintech in the Middle East and Africa (MEA) predates the name, where financial technologies like M-Pesa enhanced access to finance, improving financial inclusion measures. Fast forward to the last decade, where fintech startups, solutions, and business models have blossomed.

This book is a compendium of fintech activity and engagement in the MEA region and beyond. The texts explore various facets of fintech including regulatory frameworks, investment trends, innovation strategies, and the impact on financial inclusion, and provide valuable insights into the nuances of fintech, their providers, products, and foundational issues like culture, regulation, infrastructure, etc. It is a practical tool for regulators, policymakers, operators, practitioners, investors, and academia.

The relative newness of fintech brings about significant uncertainty and the stability of financial systems, yet these technological disruptions are also expanding financial access, addressing issues like financial inclusion. The 37 chapters in this publication represent the evolution and diversity of the fintech ecosystem. The contributions in this publication present fintech evolutions through the lenses of specific cases and national, regional, and global lenses. The central ecosystem themes focus on the policy and regulatory landscapes, financial inclusion and development, market analysis and growth strategies, and fintech investment and funding.

In addition to the importance of middle managers, strategic partnerships are another element of fintech ecosystem development and success that is espoused in ► Chap. 33.

Fintech Products and Services

From a product perspective, several chapters delve into different fintech products, sharing studies and case studies from markets and regions, and in some instances, providing comparators within and outside the Middle East and African region.

Regarding payments, ▶ Chap. 2 discusses general innovations in payment systems from a MENA perspective, highlighting the national importance of payment systems to avoid concepts like weaponized interdependence, where dominant financial networks are power tools in this economic era. ▶ Chapter 6 examines the Gulf Cooperation Council (GCC) market's buy-now, pay-later (BNPL) practices in the GCC market. ▶ Chapter 11 discusses the potential of instant inclusive payment systems (IIPS), and the roles embedded, and open finance play in their advancement, especially in enhancing interoperability, financial innovation, and empowering underserved populations. ▶ Chapter 14, through the context of mobile payments, discusses adopting financial technology solutions in fragile environments and advocating for fintech for development.

▶ Chapter 8 explores how financial technologies like mobile financial services have a transformational impact on socioeconomic issues like financial inclusion and underserved segments like women and low-income individuals.

Digital banks are a new concept and, in most African markets, piggyback on the license frameworks of legacy financial institutions. ▶ Chapter 20 is a playbook for establishing a standalone digital bank in Africa, highlighting the challenges and solutions.

Digital lending and credit are significant fintech verticals that form the context of this chapter. ▶ Chapter 15 surveys MENA digital lending disruptors and analyses their business models through the lens of global disruptors to outline future disruptors.

The drivers and enablers of crypto asset adoption is the focus of ▶ Chap. 30 drawing on insights from the MENA and Latin American regions.

While mobile financial services have significantly addressed access to finance issues and closed financial inclusion gaps, ▶ Chap. 18 takes a broader look at the evolution of the bottom of the pyramid (BoP) concept, highlighting the need for solutions to address poverty alleviation across three domains labeled as the 3Ws—Work, Women, and Well-being. ▶ Chapter 25 also highlights the inclusivity challenge despite fintech's opportunity to expand financial access, and drawing from European experiences prompts the need for an inclusive fintech ecosystem.

The need for fintech diversity in the region extends beyond gender to Islamic finance and fintech, providing Shariah-compliance financial services. Through this lens, ▶ Chap. 17 explores the catalytic nature of fintech and central bank digital currencies (CBDCs) to grow a sustainable financial ecosystem. Using Malerba's Sectoral System of Innovation (SSI) framework, ▶ Chap. 23 examines the intricate dynamics of Islamic fintech within the UAE.

General Fintech Trends

The lion share of contributions address the dynamics of the fintech ecosystem/industry—trends, benefits, opportunities, challenges, enablers, and drivers of fintech in the region. ▶ Chapter 1 examines the roles and activities of middle managers in the pre-formation, formation, implementation, and evaluation phases of international partnerships, particularly in the fintech industry in Africa. ▶ Chapter 4 presents the possibilities of embedded finance in the GCC region in transforming the financial landscape, highlighting key opportunities like enhancing customer experiences, improving financial inclusion, and driving economic diversification. ▶ Chapter 5 presents successful fintech stories from Africa and the Middle East, outlining key strategies and policies implemented by regional leaders. ▶ Chapter 9 focuses on artificial intelligence (AI) and crypto technologies and how their convergence can shape digital and economic opportunities across finance, healthcare, and supply chain management industries. ▶ Chapter 13 is a case-based chapter that examines financial technologies driving sustainable finance in the UAE. The chapter cases include P2P lending, neo-banking, and green solutions. Using Saudi Arabia as a benchmark of other emerging markets, ▶ Chap. 24 presents a model for the emergence of a fintech industry/ecosystem, highlighting strategies to boost investment and usage in the sector. ▶ Chapter 27 delves into the MENA fintech market dominated by startups and neo-banks, examining the benefits of these technological finance initiatives and the nuances of Middle Eastern and northern African countries. ▶ Chapter 29 explores intangible assets in the MENA region, focusing on their potential in the fintech industry. ▶ Chapter 35 examines fintech drivers in the UAE banking sector, emphasizing the role of regulatory support and collaborations between traditional banks and fintech startups and a balance between innovation and compliance. Black swan events like COVID-19 disrupted markets and industries. Drawing from the COVID-19 pandemic lessons, ▶ Chap. 36 is a survival guide for the fintech industry in future black swan events addressing company readiness, risk evaluation, and crisis management. ▶ Chapter 37 focuses on the sustainability of the fintech industry's new entrants (startups). The authors propose mentoring and design thinking as mutually reinforcing tools in driving innovation and growth in the financial services industry.

Fintech Challenges

Cybersecurity threats are an essential discussion topic where breaches like fraud mar the convenience of digital financial services and other financial technologies. In the cybersecurity analysis in Africa's fintech sector, ▶ Chap. 12 highlights the different opportunities and risks. Likewise, ▶ Chap. 34 takes a narrower focus on the cybersecurity of SMEs with limited digital capabilities in the GCC region. The chapter is a call to action for responsible technological innovation considering AI and machine learning to provide a risk-free and safe experience.

Funding is another challenge akin to fintech startups. Unlike incumbent financial services providers, fintech startups have relied on various forms of capital and funding strategies, including bootstrapping, angel investors, venture capital, and private equity. ▶ Chapter 16 examines venture capital as a significant source of fintech funding and examines the historical evolution and current VC landscape in Africa. ▶ Chapter 22 introduces the dynamic venture capital (VC) investment landscape in Nigeria's fintech companies, examining the legal and regulatory considerations that shape these transactions.

Policy and Regulation

Because of the threats that exist outside the domain of operators, products, and ecosystems, the regulatory environment is an important component of the fintech landscape. The relative importance of fit-for-purpose regulatory and supervisory frameworks, alternative regulatory systems, and the adoption of digital technologies is disrupting the regulatory space. Notwithstanding, the role of regulators in providing financial systems stability and integrity is unchanged. ► Chapter 28 advocates for regulators' use of regulatory technologies (RegTech) to ensure financial system stability and integrity, anchored on the nexus between regulation, technology, and data. ► Chapter 8 explores creating enabling fintech ecosystems across the continent, and the role of regulators. It discusses regulatory responses such as the Second Payment Services Directive (PSD2) and Anti-Money Laundering (AML) guidelines. ► Chapter 10 discusses the regulatory and policy environment in Africa and the role of perceived ease of doing business on the profitability of fintech firms, particularly in Nigeria. The chapter highlights the nuances of doing business in Nigeria, and unfriendly regulatory environments. ► Chapter 21 reviews the MEA fintech regulatory landscape, addressing why fintechs are regulated and presenting the historical basis for financial services regulation and its extension to fintechs.

Fintech has challenged the status quo and the role of innovation in developing and advancing financial systems. ► Chapter 31 focuses on the rule-making processes as a response to fintech in the MEA region, highlighting the role of multilateral development banks and global standard-setting bodies in initiating fintech guidance and the development of fintech-specific regulations in MEA nations.

Impacts

► Chapter 19 recognizes fintech as a crucial aspect of globalization and innovation in business yet notes that entrepreneurial education in emerging markets has not effectively integrated fintech as a supportive tool. The chapter advocates updated curricula and the importance of promoting entrepreneurial education in higher education institutions.

Digital transformation impacts individuals, businesses, and governments. Nonetheless, dematerialization is an approach that can support the effective digital transformation of administrative services; however, the legal frameworks and underlying risks need to be factored in to harness the benefits. ► Chapter 32 focuses on the legal challenges for dematerialized administrative services in the MENA Region, specifically Tunisia.

Because fintech is catalytic sectors and nations require their diverse digital transformation strategies. ► Chapter 3 reviews the UAEs approach to diversifying its economy using fintech as a pathway for immigration and other reforms to attract fintechs in the region. ► Chapter 7 examines the implications of the African Continental Free Trade Area (AfCFTA) for fintech license passporting in a bid to enhance the utility of fintech in driving the AfCFTA that is restricted due to different regulatory barriers.

► Chapter 26 explores the role of fintech in enhancing financial services to aid the transition toward a knowledge-based economy in the MENA countries.

Conclusion

This compendium is an insightful guide to fintech in the ecosystem. Topics covering general trends, ends, solutions, and legal and regulatory issues in the region and worldwide do not cover the full spectrum of fintech but introduce current trends and gaps.

Dubai, United Arab Emirates — Konstantinos Tsanis
Dubai, United Arab Emirates — Heather C. Webb
Abha, Saudi Arabia — Amira Kaddour
Ajah, Nigeria — Olayinka David-West
June 2025

Quotation

"Wisdom is like a baobab tree; no one individual can embrace it."

—*African proverb*

"Even the smallest streams, when united, form mighty rivers."

—*African proverb*

"Banking is necessary. Banks are not."

—*Bill Gates*, 1994

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I would like to express my deepest gratitude to the many individuals who have supported me throughout this journey.

To my mother, whose unwavering love, strength, and encouragement have been my foundation—thank you for always believing in me.

To my sister, for your endless support, laughter, and companionship—you have been a constant source of inspiration.

To my father, who left us too soon but whose memory continues to guide me—I carry your lessons and love with me every day.

To all the mentors, colleagues, and friends who have helped me achieve my goals—your wisdom, guidance, and kindness have shaped my path in ways I can never fully repay.

A special thanks to my dear friend Andreas, whose friendship and support have been invaluable—thank you for standing by me through thick and thin.

I dedicate this book to my uncle, who played a pivotal role in my life. Your belief in me gave me the confidence to pursue my passions, follow my choices, and grow into the person I am today.

Finally, to my three beloved nephews, Eleni, Nicolas, and Ilias—may you always dream boldly, embrace every opportunity, and achieve your fullest potential. The future is yours to shape.

With heartfelt appreciation.

—Dr. Konstantinos Tsanis

To my students, past, present, and future, whose curiosity, resilience, and pursuit of knowledge continue to inspire me every day.

To the women of the Middle East and Africa, whose creativity, leadership, and determination are reshaping the future of finance and innovation in the region and beyond.

And to all the bold innovators and positive change-makers around the world, committed to building a more inclusive, sustainable, and equitable global economy.

This work is for you.

—Dr. Kaddour

Thank you to all the members of my tribe who have played a pivotal role in shaping my vision and creating a supportive environment.

—Olayinka David-West

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Previously, he led global fintech investments at the World Bank Group, managed VC investments in the MENA region for the London Stock Exchange Group, and drove business development for Bloomberg LP. His expertise spans venture capital, digital strategy, innovation policy, and startup ecosystem development.

With extensive experience in government digitalization, policy advisory, and board leadership, he remains an active angel investor and academic contributor, focusing on dual-use technologies and tech advancement in developing countries.

He is passionate about leveraging technology, finance, and policy to drive innovation and economic transformation, shaping the next wave of global investment and digital evolution.

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An active researcher and author, she has published extensively in high-impact journals, including *Government Information Quarterly*, *IEEE Access*, and the *Journal of Multidisciplinary Healthcare*, with a focus on fintech innovation, cybersecurity, sustainability, and mental health policy. She has secured multiple research grants totaling over 486,800 AED and is the editor of several academic books, including *The Palgrave Handbook of fintech in Africa and Middle East*. As a conference organizer, journal reviewer, and speaker, she has presented at leading academic conferences such as the Strategic Management Society Annual Conference and Academy of International Business. Before transitioning into academia, she held leadership roles in financial services and escrow management in the United States. She brings a global perspective to her research and teaching, remaining committed to fostering innovation and advancing knowledge in digital finance and sustainability.

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Fintech Challenges: Launching the First Digital Bank in Africa

Konstantinos Tsanis

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Abstract

Digital banking is rapidly emerging around the world. However, the creation of digital banks has multiple challenges in different levels: regulations, infrastructure, talent, national attitudes, and company culture, among others. This is further

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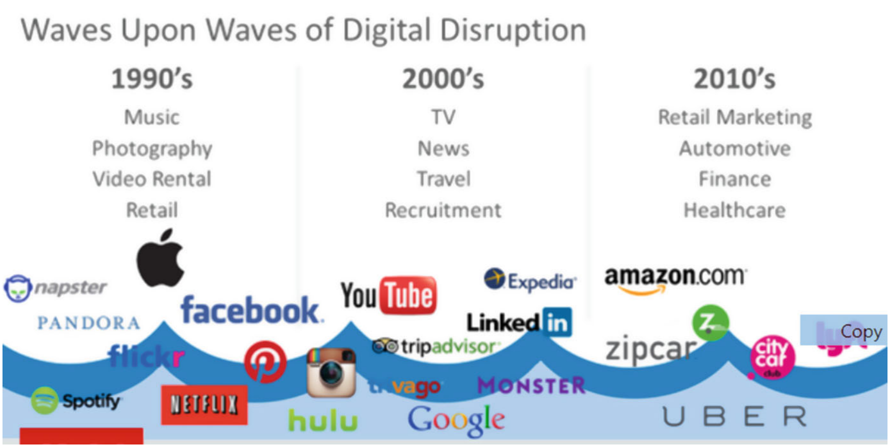
exacerbated by the fact that the development of a digital bank is a relatively new concept, both for practitioners and academics. As an outcome, there are no clear principles that are guiding their development and there are still multiple challenges when trying to build them. This chapter is an actual case study focusing on the development of the first digital bank in Africa. Multiple challenges are analyzed, and the ways that these challenges were dealt with. The chapter also provides a lot of actual work material on how key issues were solved. The chapter concludes by providing recommendations to different stakeholders and by providing an appendix with the 50 steps that need to be followed in order to develop a digital Bank from scratch.

Keywords

Digital banking · Neobank · Nigeria · Financial inclusion

1 Introduction

The banking industry is under an accelerated digital transformation route globally, despite being a relative laggard in this area. Whilst a large number of industries went digital, starting from the 1990s as it can be seen from Fig. 1, the banks have been able to resist. As Bill Gates quoted in the 1990s, banks are like "dinosaurs" (https://www.americanbanker.com/news/is-microsofts-bill-gates-right-when-he-says-banks-are-technology): They are powerful, and somehow slow moving, so they are still able to resist to technological change. This however changed in the last decade: The global Financial crisis of 2009 resulted in diminished trust to the banks from the customers. Simultaneously, the expansion of internet users, and the technological developments, enabled startups to focus on providing services that only the banks



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