Driving Financial Inclusion through FinTechs – The Case of Egypt

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Abstract

Technology integration in the financial sector holds immense potential to address critical global challenges. This paper presents a case study of the Egyptian fintech market and its role in advancing financial inclusion (FI). We reviewed literature on fintech in emerging markets and interviewed experts in the Egyptian fintech sector. To assess fintech-led FI, we apply Amartya Sen's capability approach. Our findings reveal distinct characteristics in the Egyptian fintech market compared to other developing countries, emphasizing the need for further research in the Middle Eastern region. Scarce research in this region highlights significant developments that warrant analysis. Our research underscores the importance of distinguishing between voluntary and involuntary exclusion in addressing FI and implicates that the difference between voluntary and involuntary exclusion is often disregarded in FI strategies.

Keywords

FinTech, Capability Approach, Financial Inclusion, ICT4D.

Introduction

The digital revolution has promised a world without boundaries, where opportunities are just a click away. This digital utopia, however, remains a distant reality for a substantial segment of the global population. True participation in the digital economy requires, among other things, financial inclusion (FI) – a critical endeavor to ensure universal access to essential financial services. However, despite the advances of the digital age, a significant gap in financial access persists: in 2021, 24% of adults worldwide lacked even a basic bank account (Demirgüç-Kunt et al., 2021). Fintech companies, known for their digital-first solutions, are becoming key players in facilitating access to the formal financial system. They are making it easier and cheaper for people to manage their money, track their finances, and carry out financial transactions (Ng et al., 2022; Senyo et al., 2022). For instance, Kenya's mobile payment service M-Pesa helped about 2% of the Kenyan population to rise above the poverty line (Uwamariya & Loebbecke, 2020; Wenner et al., 2018).

While M-Pesa's success in Kenya is remarkable, it is important to note that similar initiatives have faced challenges in the Middle East and North Africa (MENA) region. This region presents a distinct financial landscape, with established banking sectors and regulatory frameworks, which differ from the conditions under which M-Pesa thrived. Furthermore, cultural differences and varying levels of technological adoption impede the direct application of models like M-Pesa in the MENA context. This misalignment not only limits the applicability of successful Sub-Saharan models but also highlights a critical gap in

providing effective fintech solutions to the unbanked population of the MENA region, such as the 37.2% of Egyptians who remain without bank accounts (CBE, 2023b). The Egyptian market presents a compelling case for closer examination due to its prominent role in an FI initiative led by the World Bank Group (Alexbank, 2017), aligned with FI being at the top of Egypt's national development agenda (Hassouba, 2022).

According to the literature, fintech companies are recognized as potential FI drivers by introducing alternatives to traditional banking (Gimpel et al., 2018; Lagna & Ravishankar, 2022). By providing more easily accessible solutions and having less formal processes, fintech solutions give access to financial services that are more convenient for a broader segment of the population (Senyo et al., 2022). They are key in providing financial services to populations traditionally excluded by conventional banks (Mention, 2019). Research in emerging markets largely focuses on mobile payments (Mishra et al., 2022; Pal et al., 2021) and microfinance (Beisland et al., 2021; Cobb et al., 2016), often citing examples from Sub-Saharan Africa and Southeast Asia, like M-Pesa (Wenner et al., 2018). However, studies on fintech's impact in the MENA region, which has more developed banking systems and regulatory frameworks, are limited. This lack of research highlights a gap in understanding to what extent fintech solutions can push forward FI in the MENA context, suggesting a need for more targeted research on fintech's adoption and impact.

This research addresses the underexplored FI area in the MENA region, centering on Egypt's distinctive fintech environment. Unlike the extensively examined Sub-Saharan Africa, Egypt has robust financial institutions and a unique market dynamic promoting collaboration between fintech firms and banks. This study delves into how digital technology's facilitation of financial services influences social welfare in Egypt, applying Amartya Sen's capability approach (CA) (Sen, 1999) to discern between voluntary and involuntary FI. The CA allows us to view FI as an aspect of social development as opposed to merely being a metric to achieve economic development. Through this lens, we aim to deepen our understanding of fintech's role in FI and contextualize its impact on Egypt's cultural and regulatory landscape. Hence, we investigate: *How does integrating fintech services in Egypt's distinct financial ecosystem affect its population's actual social well-being and FI?*

We employed a qualitative research design (Eisenhardt, 1989), conducting semi-structured interviews with 14 participants, including regulators, legal experts, venture capital executives, fintech founders, and banking executives, to investigate fintech's impact on FI. We strengthened our findings by cross-referencing interview data with secondary sources, such as news articles and institutional reports. Our sample selection involved purposeful and snowball sampling to ensure diverse perspectives. Data analysis followed an inductive coding approach, identifying common themes and grouping them into meaningful clusters (Corbin & Strauss, 1990; Gioia et al., 2013). This methodology enabled us to understand the interconnected factors influencing FI within Egypt's unique fintech landscape.

Our research on Egypt's fintech ecosystem reveals a landscape where fintechs and traditional banks collaborate instead of competing. This allows fintechs to gain credibility and banks to expand their market reach. Challenges arise from an underdeveloped regulatory framework, particularly in cryptocurrencies and digital banking, and consumer resistance to change. Stringent Know-Your-Client (KYC) regulations add supply-side constraints. Despite these obstacles, regulatory improvements and initiatives like the Meeza card scheme and innovative credit scoring systems offer growth potential for FI in Egypt. Our study aligns with Amartya Sen's CA emphasizing the importance of expanding capabilities and choices for increased well-being and ultimately FI. Throughout our analysis, the CA was deemed apt for this approach since it goes beyond viewing FI as a mere KPI but questions the very motives that drive its pursuit.

Our findings show that fintech is broadening access to financial services, offering individuals in emerging markets like Egypt more options and therefore, theoretically, enhancing their well-being and thus pushing forward FI. However, an important aspect of this expansion is the nature of participation—whether changes in financial behavior are voluntary or driven by government mandates. This raises a question central to Sen's theory: does enforced participation in digital financial services truly enhance well-being if it is not based on personal preference? Future research could delve deeper into this issue, particularly focusing on the consumer perspective in Egypt, to discern if increased access to fintech genuinely translates to improved social well-being or merely a matter of increased FI.

Theoretical Background

Fintech for Development

There is a broad consensus that information and communication technology (ICT) is pivotal in fostering development and can yield a significant impact (Hatakka & De, 2011; Walsham & Sahay, 2006). Contemporary scholars are increasingly directing their attention toward understanding how the context-specific nature of ICT implementation influences their effects in various settings (De & Ratan, 2009; Sein & Harindranath, 2004). Researchers are also diligently seeking suitable theoretical frameworks to guide their investigations. This endeavor is motivated by the inherent complexity of defining metrics for assessing developmental efforts (Hatakka & De, 2011). The multifaceted nature of development makes it highly context-specific and contingent on the existing baseline conditions.

The fintech market operates at the intersection of finance and technology, presenting a multifaceted and evolving landscape. Fintech broadly involves applying digital technologies to existing financial services (Lagna & Ravishankar, 2022; Senyo & Osabutey, 2020) and providing innovative personalized financial services (Gimpel et al., 2018; Senyo et al., 2022). It disrupts the exclusivity of certain financial services, expanding access to underserved segments (Mention, 2019). Fintech's core purpose is to provide greater access to financial services, enhance financial resource management, and empower individuals (Zhou, 2012). Effective fintech implementation can promote FI by alleviation constraints that may be imposed by the formal financial system such as too stringent formal requirements or geographical reach of physical branches. Thus the provision of financial services through fintech may foster development, economic security, resilience, and alleviate poverty (Bernards, 2019). It also drives innovation and digitization within legacy financial institutions, expanding their reach (Mention, 2019). However, fintech-led FI faces barriers on both the demand and supply sides. Demand-side barriers include financial and digital illiteracy, lack of awareness, low income, lack of trust, and cultural and religious factors (Hassouba, 2022). High costs and complexity of traditional financial services create entry barriers for specific population groups (Tan et al., 2021).

Capability Approach

To address financial exclusion, it is crucial to understand the drivers of exclusion and to differentiate between voluntary and involuntary exclusion. Reasons for exclusion entail, among other factors, financial and digital illiteracy, lack of awareness, low income, lack of trust, as well as cultural and religious factors (Hassouba, 2022). As well as high barriers of entry imposed by the strict KYC processes. Voluntary exclusion occurs when individuals choose not to use financial services, often influenced by cultural, religious, or trust-related factors. In contrast, involuntary exclusion results from the inability to access financial services due to high fees or being perceived as too risky for service providers (Demirgüç-Kunt, 2008). Assessing the role and effectiveness of fintechs in fostering FI is complex. We evaluate these initiatives using the CA. Sen's CA prioritizes personal freedoms over economic outcomes, utility, or the digital divide (Clark, 2005; Zheng & Walsham, 2008). It emphasizes individuals' "capabilities" to lead valued lives and what individuals can do with the resources at their disposal, which Sen terms "functionings," or the activities and states of being that individuals deem valuable (Sen, 1999). Capabilities represent potential activities or having the freedom to pursue specific functionings (Alkire, 2005). Actualizing these capabilities is then a matter of personal preferences that depends on personal attributes, societal norms, and environmental conditions (Andrade & Doolin, 2016; Clark, 2005). The CA evaluates social development based on increased freedom, well-being, and individuals' ability to make choices that add value to their lives. It centers on individuals' freedom and the provision of basic resources (Alkire, 2005). In our study of FI in Egypt, we adopt Sen's CA, emphasizing that the reason behind pursuing FI as a national goal should be expanding the individuals' freedom and array of capabilities. While some IS research has applied the CA to study technology's impact on social inclusion and exclusion (Andrade & Doolin, 2016; Zheng & Walsham, 2008), the societal impact of fintech has not yet been examined using this approach.

Research Design

We opted for a qualitative research design, using a holistic case study covering all facets of fintech-led FI in Egypt (Eisenhardt, 1989; Yin, 2018). That is, to fully understand and explain the complex nature of the Egyptian fintech ecosystem and its impact on FI. This objective was pursued by conducting interviews, reviewing previous literature on the subject, and scrutinizing secondary sources to further understand the case setting and the aspects not yet covered by academic research but are relevant to the case (Gioia et al., 2013). This allows the contextualization of the research (Klein & Myers, 1999), which is crucial in a field as dynamic and rapidly changing as fintech.

Data Collection and Analysis

The data collected at this research stage consists of semi-structured interviews conducted with experts from the Egyptian fintech market and secondary literature to complement and verify the data collected in the interviews (Gioia et al., 2013). The variety of data sources assists in getting a solid understanding of the research topic and the case setting chosen for the case study (Eisenhardt, 1989). 10 interviews with 14 interview partners in total took place between December 2022 and January 2023 (i.e., six interviews have been conducted with one interview partner each, whilst the remaining four have been conducted with two interview partners from the same organization respectively). To decide on a sample of interviewees, we started with purposeful sampling, complemented by the snowball technique to find candidates to fill the remaining gaps in the research. Four main groups were targeted with interviews: regulators and legal experts, venture capital firms, fintech startup executives, and banking executives. Some of the interview partners have backgrounds in more than one of the mentioned fields, which further enriched the insights generated from the interviews. The interviews were designed to cover various facets of fintech and FI to identify causalities and relationships between contrasting phenomena influencing and shaping the fintech ecosystem and FI. To ensure the validity and reliability of collected data, the interview's input was either verified through information provided by other interview partners or by relying on secondary data sources such as news articles or reports from local organizations or banks (Eisenhardt, 1989; Yin, 2018).

To analyze the collected data from the interviews, we followed an inductive coding approach. Starting with open coding, common themes were identified through axial coding, allowing us to label and cluster the data into second-order themes and aggregate dimensions (Corbin & Strauss, 1990; Gioia et al., 2013). During the coding process, we constantly triangulated our interview insights with secondary data and compared them to existing literature. We repeatedly analyzed the transcripts and our previous findings and restructured our results until they could be illustrated in a data structure that offers a comprehensible representation of the different concepts and their associations with each other (Gioia et al., 2013). This analysis enabled us to establish a blueprint of the links, dynamics, and strains of the fintech ecosystem in Egypt and its diverse stakeholders and how they come into play with FI.

Case Setting of Fintech in Egypt

Egypt's fintech ecosystem offers a compelling case for studying its impact on FI due to several key factors. Egypt has a substantial unbanked population (CBE, 2023b) with FI currently ranking high on its national agenda (Hassouba, 2022). In 2023, it ranked second in fintech VC investments in Africa and third in the MENA region, signifying the industry's growth potential (CBE, 2023b). A well-established informal market in Egypt provides ample room for fintech to disrupt traditional financial services. The formalization of this informal segment is a key aspect of fintech's impact, particularly in a country with a substantial informal economy. Egypt's high poverty rate of 29.7% (World Bank, 2023) and its young population with a median age of 24.7 years (CBE, 2022) render it an attractive market for fintech-driven financial services. As a lower-middle-income country, Egypt holds promising advancement prospects through fintech development. The fact that 37.2% of Egypt's population remains unbanked further underscores the relevance of this case study (CBE, 2023b). Furthermore, the researchers have access to a valuable network in Egypt, facilitating data collection and interviews. The Egyptian fintech ecosystem involves key actors, including regulators (Central Bank of Egypt and Financial Regulatory Authority), fintech companies, investors, accelerators, and legacy financial institutions (CBE, 2023a). Figure 1 gives a simplified overview of the Egyptian fintech ecosystem.

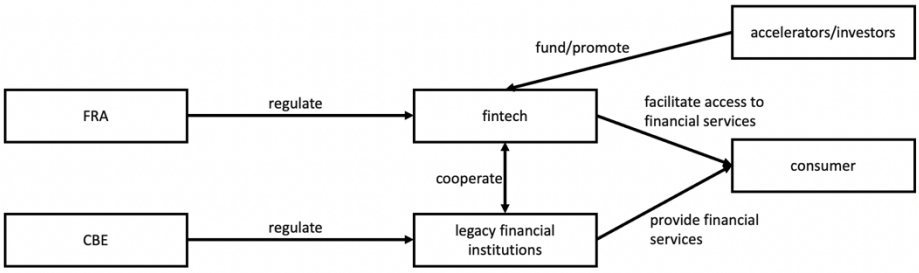


Figure 1: Egyptian fintech ecosystem

Egypt has made efforts to promote FI, with the Central Bank of Egypt's membership in the Alliance for Financial Inclusion (AFI) aligning with national development goals (AFI, 2023). Despite these efforts, FI rates in Egypt remain relatively low, warranting further examination. While transactional account ownership has grown from 27.4% in 2016 to 60.6% in 2022 (CBE, 2022), there is significant room for improvement. The fintech sector, with 108 startups seeking financing totaling over $600 million, is poised for expansion and development (CBE, 2022). Investments in fintech have increased 12-fold between 2017 and 2022, boosting awareness and adoption of fintech solutions in Egypt's entrepreneurial landscape (CBE, 2022).

Results

Our research findings illuminate the evolving fintech landscape in Egypt. Contrary to expectations of fintech replacing traditional banks, our insights reveal that their sustainability relies on strategic partnerships with established financial institutions. Fintechs offer agility, flexibility, and the ability to provide tailored solutions to previously underserved segments. This symbiotic relationship features an informal co-dependence, with fintechs relying on banks for credibility and operational sustainability while banks expand into untapped segments and thus fulfill FI mandates through fintech collaboration. As the head of FI of a bank mentions: “We have experience in financials, we know whether a business case works, and can challenge fintechs and startups. We know if whatever [fintechs] are giving to the lower income segments is something sustainable and whether it is going to cause over-indebtedness, is protecting the consumer and if it is creating active usage.”. However, Egypt's regulatory environment is relatively immature and fails to address the intersection of finance and technology comprehensively. Innovative financial products like cryptocurrencies and digital banks remain prohibited due to the absence of appropriate legal frameworks, posing significant challenges to fintech growth in Egypt.

On the demand side, our research has highlighted various barriers hindering the adoption of fintech solutions. These include reluctance to change, low awareness or illiteracy, a well-established informal economy, resource limitations, and alternative social safety nets. As a senior program scout at a VC states: “If [people] are familiar with how something works, then they will keep on doing it the same way until someone or something forces them not to. It seems too much effort for them to try to understand and learn something new when what they are already familiar with is still an option.” Additionally, religious beliefs, particularly concerning interest-bearing investments, present hurdles to fintech adoption. Mistrust in fintechs, however, remains a point of contention, with some arguing it is a significant barrier while others dismiss its relevance. Supply-side barriers are also in evidence, with strict regulations, such as demanding Know-Your-Client (KYC) processes limiting access to specific population segments due to the required documents. The nascent state of regulation and the underdeveloped technological infrastructure further obstruct the advancement of fintech solutions in Egypt. In safeguarding consumer interests, the CBE imposes strict limitations on new market entrants, directly or indirectly, depending on its authority within the new entrant's jurisdiction.

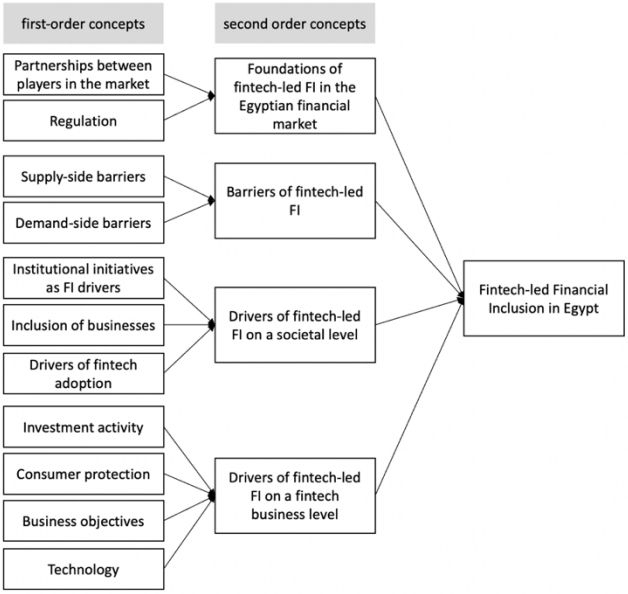


Figure 2: Coding of interview transcripts - Aspect of fintech-led financial inclusion in Egypt

Our research indicates untapped potential for Egypt to bolster its regulatory framework and technological infrastructure, fostering further growth in the fintech sector. Proposed initiatives include formulating regulations to allow and govern digital banks, issuing rules regulating electronic authentication and online terms and conditions, and establishing an Electronic-KYC system. These measures could significantly contribute to the expansion and enhancement of the fintech sector in Egypt. Several initiatives have been undertaken to address the hurdles above in pursuit of FI. The Meeza card scheme, akin to payment networks like Visa and Mastercard, which operates exclusively nationally, exemplifies one such endeavor by offering similar services at lower cost. Additionally, some fintechs have introduced innovative behavioral credit scoring systems to assess the creditworthiness of individuals previously excluded from the traditional credit scoring system. These measures indicate Egypt's commitment to surmounting the barriers to FI and promoting the growth of the fintech sector within the country.

Discussion

Introducing technology into our daily lives serves a fundamental purpose – to empower individuals by increasing their overall well-being through expanded access to a wide array of options (Zheng & Stahl, 2011). Sen's CA provides a valuable theoretical lens for understanding this connection, as it underscores that an individual's increased well-being is a direct result of increased attainable options, i.e., capabilities, and choices, i.e., functionings. Technology, including fintech, significantly broadens the spectrum of options accessible to individuals by lowering entry barriers to markets or services previously out of reach. Taking FI into consideration, it entails providing those who are financially excluded with access to financial services intending to support them to overcome financial hardships and lead a more economically resilient life. From a CA perspective, the advancement of FI in a country does not directly implicate the improved well-being of its population. Since access to fintech solutions does not necessarily lead to their adoption, especially in the cases of voluntary exclusion. Reducing the focus of impact measurement on actual income and economic success of fintech or FI efforts disregards the essence of what the CA characterizes (Sen, 1999). Conceivably, access to financial services enables users to experience increased freedom concerning making decisions while having several options available as opposed to opting for one option for lack of available alternatives. In this context, the CA increases the focus on the expanded freedom and the authority of making one's own financial decisions and the empowerment experienced as a consequence.

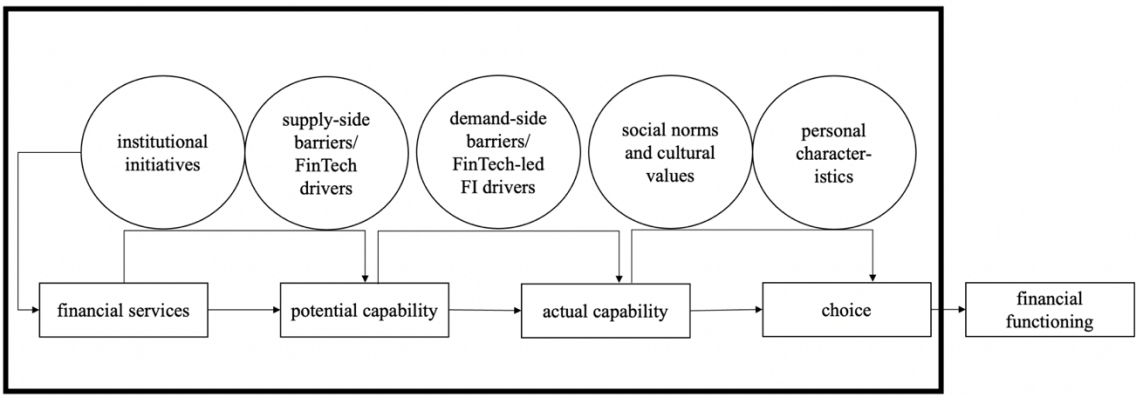


Figure 3: Capability approach to financial inclusion

In line with Sen's CA, our findings reveal that fintech introduction has significantly transformed Egypt's financial market, increasing participation among a broader population. While influenced by various factors, this transformation consistently expands possibilities through enhanced financial access. However, a crucial aspect of this discussion revolves around the voluntariness of these changes. Governmental regulations often drive FI efforts, raising the question of whether genuine well-being can result from mandates rather than voluntary choices. Sen's approach challenges us to ponder whether well-being primarily hinges on expanding capabilities—the range of options available for choice—rather than people simply using fintech for convenience. If digital transformation toward fintech is predominantly enforced by government efforts without voluntary participation, does it genuinely enhance well-being, according to Sen's CA? Sen emphasizes that true well-being goes beyond the actual action but rather comes from the freedom of choice, but is about the freedom and ability to choose, as the richness of choices enhances human welfare. The debate between enforcing regulations and promoting voluntary adoption for FI prompts us to consider whether the goal should be enabling individuals to make choices independently or implementing measures to ensure FI.

Our future research aims to comprehensively understand the relationship between fintech, FI, and social well-being from the consumer's perspective in Egypt's unique context. These insights will benefit policymakers, industry stakeholders, and scholars striving for more inclusive financial systems in emerging economies. To achieve this, we plan to conduct in-depth interviews with consumers representing diverse backgrounds and demographics in Egypt. By exploring their experiences and perspectives, we aim to determine whether increased access to financial services through fintech genuinely leads to improved well-being. Sen's CA will continue to guide our research, emphasizing the importance of empowering individuals with the freedom to choose and enhance their lives. Additionally, we recognize the significance of distinguishing between voluntary and involuntary exclusion in the evolving fintech landscape, which will be a crucial aspect of our investigation.

Our research has several implications. Firstly, there is a need to develop a framework for assessing the effectiveness of initiatives addressing illiteracy and lack of awareness. Previous literature and expert interviews in the Egyptian fintech field have highlighted these issues as significant barriers to FI, yet there is no framework to evaluate the impact of initiatives targeting these challenges. Secondly, mobile network operators (MNOs) are pivotal in driving fintech-led FI in countries with poor infrastructure and widely dispersed populations. However, in Egypt, where the population is concentrated in a small geographical area, traditional financial institutions are not geographically distant for a significant portion of the population. Therefore, FI efforts in Egypt should prioritize addressing other exclusion factors. Finally, it is crucial to differentiate between voluntary and involuntary exclusion to tailor the right approach to counteract the reasons for exclusion effectively. Neglecting this distinction can result in wasted resources and ineffective FI promotion efforts. To pursue FI successfully, it is essential to identify the specific reasons for exclusion and address them accordingly.

Limitations and Future Research

This study sheds light on the dynamics of the Egyptian fintech sector and its role in fostering financial inclusion (FI), yet its applicability to developed markets may be limited, urging future research to explore varied market contexts. The sample size of interviewees is restricted, indicating a potential for expansion in subsequent studies. Moreover, the scarcity of research in the Middle Eastern region underscores the importance of investigating other countries within the region to identify unique characteristics, thereby offering insights for comparative studies on global financial markets.

Conclusion

This paper examines the potential of fintech platforms to promote FI in emerging economies, focusing on Egypt. It demonstrates how technological advancements in the financial sector and institutional initiatives encourage financially excluded populations to enter the formal financial system. Fintech-led FI aims to provide digital financial services to those with limited access, particularly the underbanked, addressing societal issues like poverty. Fintech offers numerous capabilities, empowering individuals previously denied financial access to better handle their finances. This contributes to the ultimate goal of improving well-being through enhanced financial autonomy. In conclusion, FI is gaining global attention, with international organizations and countries collaborating to advance it. Fintech is recognized as a viable means to achieve FI by expanding access to financial services. Addressing FI benefits unbanked and underserved populations and the overall economy, stimulating economic activity and reducing poverty rates.

REFERENCES

AFI. (2023). *Alliance for Financial Inclusion Website*. Retrieved 04/11/2023 from https://www.afi-global.org/members/

Alexbank. (2017). *Financial Inclusion in Egypt*. https://www.alexbank.com/document/documents/ALEX/Retail/Research/Flash-Note/AR/Financial-Inclusion_Dec17.pdf

Alkire, S. (2005). Why the Capability Approach? *Journal of Human Development*, *6*(1), 115–135.

Andrade, A. D., & Doolin, B. (2016). Information and Communication Technology and the Social Inclusion of Refugees. *MIS Quarterly*, *40*(2), 405-416.

Beisland, L. A., Djan, K. O., Mersland, R., & Randøy, T. (2021). Measuring Social Performance in Social Enterprises: A Global Study of Microfinance Institutions. *Journal of Business Ethics*, *171*(1), 51-71.

Bernards, N. (2019). The poverty of fintech? Psychometrics, credit infrastructures, and the limits of financialization. *Review of International Political Economy*, *26*(5), 815–838.

CBE. (2022). *Financial Inlclusion Strategy*. https://www.cbe.org.eg/-/media/project/cbe/page-content/rich-text/financial-inclusion/the-central-bank-of-egypt-launches-the-financial-inclusion-strategy-(2022-2025).pdf

CBE. (2023a). *Central Bank of Egypt Website*. Retrieved 04/11/2023 from https://www.cbe.org.eg/en/financial-stability/macroprudential/overview

CBE. (2023b). *Egypt FinTech Landscape Report*.

Clark, D. A. (2005). Sen's capability approach and the many spaces of human well-being. *The Journal of Development Studies*, *41*(8), 1339-1368.

Cobb, J. A., Wry, T., & Zhao, E. Y. (2016). Funding financial inclusion: Institutional logics and the contextual contingency of funding for microfinance organizations. *Academy of Management Journal*, *59*(6), 2103-2131.

Corbin, J. M., & Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative sociology*, *13*(1), 3-21.

De, R., & Ratan, A. L. (2009). Whose gain is it anyway? Structurational perspectives on deploying ICTs for development in India's microfinance sector. *Information Technology for Development*, *15*(4), 259-282.

Demirgüç-Kunt, A. (2008). *Finance for all?: Policies and Pitfalls in Expanding Access*. World Bank. https://elibrary.worldbank.org/doi/abs/10.1596/978-0-8213-7291-

3#:~:text=Finance%20for%20All%3F%3A%20Policies,that%20can%20improve%20access%20for

Demirgüç-Kunt, A., Klapper, L., Singer, D., & Ansar, S. (2021). *The Global Findex Database*. Retrieved 25.03.2023 from https://www.worldbank.org/en/publication/globalfindex

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of management review*, *14*(4), 532-550.

Gimpel, H., Rau, D., & Röglinger, M. (2018). Understanding FinTech start-ups – a taxonomy of consumer-oriented service offerings. *Electronic Markets*, *28*(3), 245–264.

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking Qualitative Rigor in Inductive Research. *Organizational research methods*, *16*(1), 15–31.

Hassouba, T. A. (2022). Financial Inclusion in Egypt: The Road Ahead. *Review of Economics and Political Science*, 22.

Hatakka, M., & De, R. (2011). *Development, Capabilities and Technology : an Evaluative Framework* 11th International Conference on Social Implications of Computers in Developing Countries,

Klein, H. K., & Myers, M. D. (1999). A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems. *MIS Quarterly*, *23*(1), 67.

Lagna, A., & Ravishankar, M. N. (2022). Making the world a better place with fintech research. *Information Systems Journal*, *32*(1), 61–102.

Mention, A.-L. (2019). The Future of Fintech. *Research-Technology Management*, *62*(4), 59–63.

Mishra, V., Walsh, I., & Srivastava, A. (2022). Merchants' adoption of mobile payment in emerging economies: the case of unorganised retailers in India. *European Journal of Information Systems*, *31*(1), 74-90.

Ng, E., Tan, B., Sun, Y., & Meng, T. (2022). The Strategic Options of Fintech Platforms: An Overview and Research Agenda. *Information Systems Journal*, *33*(2), 192–231.

Pal, A., Herath, T., De, R., & Raghav Rao, H. (2021). Why do people use mobile payment technologies and why would they continue? An examination and implications from India. *Research policy*, *50*(6), 104228.

Sein, M. K., & Harindranath, G. (2004). Conceptualizing the ICT Artifact: Toward Understanding the Role of ICT in National Development. *The Information Society*, *20*(1), 15-24.

Sen, A. (1999). *Development as Freedom*.

Senyo, P. K., Gozman, D., Karanasios, S., Dacre, N., & Baba, M. (2022). Moving away from trading on the margins: Economic empowerment of informal businesses through FinTech. *Information Systems Journal*, *33*(1), 154–184.

Senyo, P. K., & Osabutey, E. L. C. (2020). Unearthing antecedents to financial inclusion through FinTech innovations. *Technovation*, *98*, 102155.

Tan, T., Zhang, Y., Suang, C., & Ge, C. (2021). Empowerment of Grassroots Consumers: A Revelatory Case of a Chinese Fintech Innovation. *Journal of the Association for Information Systems*, *22*(1), 179–203.

Uwamariya, M., & Loebbecke, C. (2020). Learning from the mobile payment role model: lessons from Kenya for neighboring Rwanda. *Information Technology for Development*, *26*(1), 108–127.

Walsham, G., & Sahay, S. (2006). Research on information systems in developing countries: Current landscape and future prospects. *Information Technology for Development*, *12*(1), 7-24.

Wenner, G., Bram, J. T., Marino, M., Obeysekare, E., & Mehta, K. (2018). Organizational models of mobile payment systems in low-resource environments. *Information Technology for Development*, *24*(4), 681–705.

World Bank. (2023). *Poverty & Equity Brief - Arab Republic of Egypt*. https://databankfiles.worldbank.org/public/ddpext_download/poverty/987B9C90-CB9F-4D93-AE8C-750588BF00QA/current/Global_POVEQ_EGY.pdf

Yin, R. K. (2018). *Case Study Research and Applications: Design and Methods* (6 ed.).

Zheng, Y., & Stahl, B. C. (2011). Technology, capabilities and critical perspectives: what can critical theory contribute to Sen's capability approach? *Ethics and Information Technology*, *13*(2), 69–80.

Zheng, Y., & Walsham, G. (2008). Inequality of what? Social exclusion in the e-society as capability deprivation. *Information Technology & People*, *21*(3), 222-243.

Zhou, T. (2012). Understanding users' initial trust in mobile banking: An elaboration likelihood perspective. *Computers in Human Behavior*, *28*(4), 1518–1525.