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E-COMMERCE AND FINANCIAL INCLUSION

Abstract

Rapid growth in e-commerce and fintech has remarkably increased digital financial service accessibility. Tools like digital payments, smartphone banking apps, and fintech solutions have opened up fresh potential, particularly for segments that were otherwise excluded from the formally dominant banking paradigm. High usage of mobile wallets, electronic payments, and non-mortgage loan strategies has encouraged the inclusion of both individuals and small businesses in the digital economy domain. Data-oriented technology implementations have improved risk assessment processes and helped connect users without bank accounts with the services. Even so, challenges like the digital divide, cyber risks, and uncertain regulatory terms remain major concerns. Sustainable gains would only result from the complementarity of technological proliferation with the building of safe and inclusive digital spaces, in addition to better regulatory frameworks.

Keywords: *e-commerce, financial inclusion, digital payments, mobile banking, fintech, financial innovation.*

INTRODUCTION

Over the past few years, e-commerce has transformed the global buying and selling of goods and services. While at the same time, ensuring that everyone accesses financial services has gained significant importance as well. Financial inclusion is defined as ensuring that all individuals and enterprises have access to useful and affordable financial products and services such as payments, loans, savings, and insurance. The World Bank reports that an estimated 1.4 billion adults globally do not possess banking accounts and can neither access the mainstream financial services, with this prevalence being mainly pronounced in developing nations (World Bank, 2023).

This alignment of e-commerce and financial inclusion has opened up new possibilities for connecting people without banking coverage with mainstream financial networks. This article explores digital payments, cell phone banking, and other financial technologies that allow more people to benefit from financial services with e-commerce platforms. Recognizing this correlation can aid policymakers and influential bodies to use technology in a better way for economic growth and inequality reduction.

THEORETICAL APPROACHES

The relationship of electronic commerce and financial inclusion is tied, in essence, to the way in which digital technologies alter access to financial services. Financial inclusion usually refers to the ability of individuals and businesses to access cheap and valuable financial products - including savings accounts, payments, credit facilities, and insurance - through traditional channels. Many low-income adults, rural dwellers, and informal economy workers in the past have been excluded from such services due to barriers like geographical remoteness, lack of documentation, or high service prices.

E-commerce, defined as the internet-based transaction of goods and services, is transforming the dynamics of economic participation. Furthermore, it is more and more acting as an entry point for gaining access to financial services. Financial technology and digital payment platforms have been mainly responsible for prompting policymakers to explore their potential

benefits for financial development and resilience, alongside their respective risks and the need for adequate regulatory responses (Risman et al., 2021).

The advent of cell phone banking and financial technology (fintech) has immensely propelled this revolution. Dorfleitner et al. (2017) term fintech as the "businesses that use innovative technologies to provide financial services," and they indicate the revolutionary potential of technology in transforming the very nature of the financial sector itself. These technologies present flexible, low-cost solutions customized for demographics that had long been outside banking conventions.

Foreseeing future trends, e-commerce and digital finance cooperation is likely to grow more apparent. With more small businesses and consumers entering online platforms, more inclusive and convenient financial instruments will be in demand. Meanwhile, advances in blockchain technology, artificial intelligence, and data mining have revolutionized risk control, payment systems, and logistics financing, and entailed an inclusive multi-dimensional ecosystem in which policy, technological advancements, and market forces intersect (Gomber et al., 2017; Xiang & Yang, 2024; Harish et al., 2021).

By comprehending e-commerce commercially and financially, it becomes more obvious that digital ecosystems have the potential to support long-term, inclusive economic growth.

ANALYSIS

Role of Digital Payments in Financial Inclusion

Digital payments are becoming increasingly at the heart of financial inclusion. Mobile money across the world carried out approximately 108 billion transactions, amounting to over US\$1.68 trillion, recording a 20% rise in number of transactions and 16% increase in value of transactions year after year in 2024.

Such financial intermediaries allow individuals without formal bank accounts to send, receive, and securely retain financial value digitally, consequently cutting down on cash transactions. As monetary payments are transmitted into accounts digitally - salaries, social transfers, or commercial payments - individuals exhibit a growing probability of accessing additional financial services, for example, saving or credit services. Around the world, from the report of the Global Findex 2021, approximately 36% of individuals residing in developing nations have payments deposited into a formal account. Of this number, 83% transmit digital payment transfers, while approximately 40% have uses of accounts for saving or borrowing activities.

Role of Mobile Banking and Fintech

The mobile money services providers are also diversifying their services with complementary financial services such as credit, saving, and insurance, for instance. Up to June 2024, 44% of them have introduced credit services, which is the most prevalent complementary financial service provided. Approximately a third have introduced services for saving, while insurance remains the least provided service with approximately 28% of providers introducing it. (<https://www.gsma.com/newsroom/press-release/mobile-money-surpasses-two-billion-registered-accounts-and-over-half-a-billion-monthly-active-users-globally>).

They allow individuals without a history of banking to avail usage, behavioral, or transaction-based financial products. Fintech also enhances convenience: penetration of the mobile phones allows for access without physical banks, and portals make use of simplified online KYC (know your customer) protocols.

Financial technology innovations, encompassing artificial intelligence-driven credit scoring and blockchain technologies, facilitate the provision of customized financial services. A prominent domain for the application of AI within the fintech sector is in digital payments. Enterprises such as PayPal, Square, and Stripe employ artificial intelligence to identify fraudulent transactions, enhance transaction processing speeds, and customize user experiences (Chen et al., 2020).

Role of E-Commerce Platforms in Financial Inclusion

E-commerce platforms provide market access, not only that, but there are financial services embedded too. Amazon, Alibaba, and Shopify enable small- and medium enterprise (SMEs) companies to sell online through embedded payments.

In China, Alibaba offers a vast range of services across several industries, such as e-commerce sites (Taobao, Tmall, Alibaba.com, Aliexpress.com, and 1688.com), cloud services (Aliyun), entertainment services (Youku, Ali music, Ali Pictures), and other services (Alipay, Cainiao, Amap, Ele.me, Ding Talk, and Ali Health). This degree of integration makes it easy for sellers to build credit histories and receive funding based on their sales information.

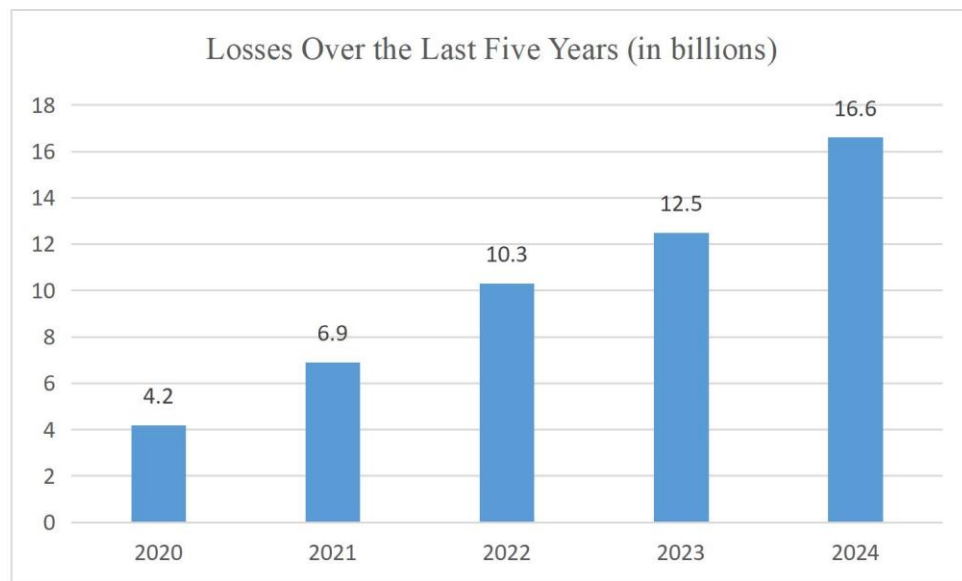
Additionally, e-commerce facilitates financial literacy since it encourages users into adoption of online payments and study of financial products through the platform interfaces.

Challenges and Risks

Smith (1776), Ricardo (1816) and Marx (1894/1967) did recognize that operating an economy's monetary system was costly and that improvements to the payment and credit systems could achieve staggering savings in the cost of operating the metallic currencies of the day.

Despite significant growth potential, there are setbacks. Professor Doris Estelle Long, Professor Emerita of Law observes that “cyberspace is often a battlefield with a wide array of armies posed to challenge one another across the increasing array of rhetoric and technology that has made it such a potent arena for global digital commerce...” Issues related to technology have been included under the scope of operational risk, recognized as a main class of financial risk, along with credit risk, market risk and legal risk (<https://www.bis.org/publ/bcbs189.pdf>). The digital divide means nearly 2.9 billion individuals worldwide continue to not have access to the internet, limiting their potential to participate in digital financial services (ITU, 2023). Women, rural communities, and older adults are disproportionately affected.

Security problems are also an obstacle to adoption. Digital payment-related cybercrime increased 15% in 2023 globally, fueling user distrust (FBI Cybercrime Report, 2023).



Losses Over the Last Five Years

Source: FBI Annual Report (https://www.ic3.gov/AnnualReport/Reports/2024_IC3Report.pdf)

Chart demonstrates loss amounts from 2020 to 2024. Over \$50 billion dollars lost was reported for this duration. Total financial losses reported to the FBI's Internet Crime Complaint Center (IC3) surged to \$12.5 billion in 2023, up from approximately \$10.3 billion in 2022. This represents a 22% increase in losses due to cybercrime, underscoring rising security threats in digital environments. Investment scams was the largest category of loss, followed by business

email compromise and tech support scams. The growth in the cyber threat landscape can erode user trust in electronic payment systems, placing a brake on financial inclusion and e-commerce adoption, especially by weaker groups like the elderly or new digital consumers.

In order to combat increasing cybercrime during digital payments as well as to achieve financial inclusion, some measures are of the utmost importance. First of all, digital platforms must tighten user authentication through the use of multi-factor authentication as well as biometric identification. awareness campaigns among the general public also become utterly necessary to inform people about phishing as well as payment fraud. Governments must update regulations in the context of fintech advances as well as establish stringent safeguards for data. Such platforms as Alibaba can make investments in AI-powered fraud identification as well as real-time monitoring. Additionally, provision of protection policies to consumers - such as insurance or purchase protection - can help to help build confidence as well as encourage wider participation in the world of cyberspace.

Regulatory frameworks are often unable to keep pace with rapid fintech innovation, raising unanswered questions. Infrastructural deficiencies, such as unreliable power and patchy mobile networks, restrict development in the majority of developing regions.

RESULT

The intersection of e-commerce and financial inclusion has the transformative power to reach the underserved globally with the expansion of financial services. Digital payments, mobile banking, and innovation with fintech managed to bring millions into the fold of the formal financial sector, accelerating entrepreneurship, as well as economic participation.

However, digital divide issues, security concerns, as well as regulatory hurdles must be addressed. Policymakers will be required to invest funds in building digital networks, economic education development, as well as development of inclusive policies that will promote sustainability.

The future research ought to give attention to scalable as well as non-discriminatory frameworks harnessing the e-commerce infrastructures to achieve financial inclusion, mainly in developing economies. The understanding of the interlink among e-commerce as well as financial inclusion is crucial to achieve balanced economic growth as well as to prevent financial exclusion.

References:

1. World Bank (2025). Financial Inclusion.
<https://www.worldbank.org/en/topic/financialinclusion/overview>
2. Risman, A., Mulyana, B., Silvatika, B., and Sulaeman, A. (2021). The effect of digital finance on financial stability. *Management Science Letters*, 11(7), 1979-1984.
3. Dorfleitner, G., Hornuf, L., Schmitt, M., Weber, M., Dorfleitner, G., Hornuf, L. & Weber, M. (2017). Definition of FinTech and description of the FinTech industry. *FinTech in Germany*, 5-10
4. Gomber, P., Koch, J. A., & Siering, M. (2017). Digital Finance and FinTech: current research and future research directions. *Journal of business economics*, 87, 537-580.
5. GSMA. (2024). Mobile Money Surpasses Two Billion Registered Accounts and Over Half a Billion Monthly Active Users Globally. GSMA.
<https://www.gsma.com/newsroom/press-release/mobile-money-surpasses-two-billion-registered-accounts-and-over-half-a-billion-monthly-active-users-globally>
6. World Bank. (2022). COVID-19 Boosted the Adoption of Digital Financial Services. <https://www.worldbank.org/en/news/feature/2022/07/21/covid-19-boosted-the-adoption-of-digital-financial-services>
7. Chen, X., Huang, B., & Zhao, L. (2020). AI-driven digital payments: Fraud detection and transaction efficiency. *International Journal of Financial Studies*, 8(2), 40.

8. Simply Wall St. (2024). Alibaba Group Holding ownership. December 22, 2024, from <https://simplywall.st/stocks/us/retail/nysebaba/alibaba-group-holding/ownership>
9. Smith, A. (1776) An Inquiry into the Nature and Causes of the Wealth of Nations. London: W. Strahan and T. Cadell.
10. Ricardo, D. (1816) Proposals for an Economical and Secure Currency with Observations on the Profits of the Bank of England as They Regard the Public and the Proprietors of the Bank
11. Marx, K. (1894/1967) Capital, Volume III. New York: International Publishers
12. Doris Estelle Long, Messages from the Front: Hard Earned Lessons on Information Security from the IP War, 16 MICH. ST. INT'L L. REV. 71 (2007), <http://ssrn.com/abstract=2223165>
13. Basel Committee on Banking Supervision, Basel III: A global regulatory framework for more resilient banking systems (December 2017) < <https://www.bis.org/publ/bcbs189.pdf>>.
14. ITU (2023). <https://www.itu.int/en/mediacentre/Pages/PR-2023-09-12-universal-and-meaningful-connectivity-by-2030.aspx>
15. FBI. (2023). Internet Crime Report 2023. Federal Bureau of Investigation. Retrieved from <https://www.ic3.gov/>
16. FBI Annual Report (https://www.ic3.gov/AnnualReport/Reports/2024_IC3Report.pdf)
17. K. Agius, The ecotourism hub: A joint cross-border marketing strategy for peripheral islands, in Islands and Tourism: An Anthology (CABI), 82-100 (2023)

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Elektron ticarət və maliyyə inklüzivliyi

Xülasə

Elektron ticarət və maliyyə texnologiyalarında (finteklərdə) sürətli artım rəqəmsal maliyyə xidmətlərinin alçatanlığını nəzərəcarpacaq dərəcədə artırır. Rəqəmsal ödənişlər, mobil bank proqramları və fintek həlləri kimi alətlər, xüsusən də formal olaraq dominant bankçılıq paradigmasından kənar qalan seqmentlər üçün yeni potensial açdı. Mobil pul kisələrindən, elektron ödənişlərdən və qeyri-ipoteka krediti strategiyalarından yüksək istifadə həm fiziki şəxslərin, həm də kiçik biznesin rəqəmsal iqtisadiyyat sahəsinə daxil edilməsini təşviq edib. Məlumat yönümlü texnologiya tətbiqləri risklərin qiymətləndirilməsi proseslərini təkmilləşdirdi və bank hesabı olmayan istifadəçiləri xidmətlərlə əlaqələndirməyə kömək etdi. Bununla belə, rəqəmsal uçurum, kiber risklər və qeyri-müəyyən tənzimləmə şərtləri kimi problemlər əsas narahatlıqlar olaraq qalır. Davamlı qazanc yalnız daha yaxşı tənzimləyici çərçivələrə əlavə olaraq, təhlükəsiz və inklüziv rəqəmsal sahələrin qurulması ilə texnoloji yayılmanın tamamlanması nəticəsində əldə edilə bilər.

***Açar sözlər:** elektron kommersiya, maliyyə inklüzivliyi, rəqəmsal ödənişlər, mobil bankçılıq, fintek, maliyyə innovasiyaları.*