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Empirical Insights into Financial Integration: Fintech Credit and Regulatory Dynamics

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Abstract

Financial integration is important because it has the potential to enhance economic growth and stability by facilitating cross-border capital flows and reducing financial market fragmentation. This study investigates the influence of FinTech credit and banking regulations on financial integration in both developed and developing countries, spanning the period from 2013 to 2019. We consider financial integration to be the dependent variable, and we select FinTech credit, banking regulations, bank concentration, remittance volumes, state-owned enterprises, and financial development as explanatory variables. The study employs the Generalized Method of Moments (GMM) to estimate the coefficients. The findings indicate that FinTech credit, remittance volumes, and financial development all contribute positively to financial integration. In contrast, banking regulations exhibit an insignificant relationship with financial integration. Moreover, the results indicate that bank concentration and state-owned enterprises act as deterrents to financial integration among nations. The implications of the results suggest that to enhance the level of financial integration, global economies should promote FinTech credit, increase remittance volumes, and foster financial development while concurrently discouraging bank concentration and state-owned enterprises.

Keywords: Financial integration, state own enterprises, financial development, FinTech credit, bank regulations, amount of remittances, bank concentration

Introduction

In today's globalized era, nations around the world are proactively seeking integration by breaking down barriers, with a particular focus on trade, finance, and investment. This form of economic globalization entails a heightened accessibility to international trade, financial interactions, and foreign direct investment (Todaro, 1995; Goldin & Reinert, 2007; Zhu, 2010; Iqbal, 2018; Wali, 2018; Ali, 2022). The integration of goods and financial markets on a global scale is anticipated to yield substantial benefits, including price reductions, heightened innovation, and accelerated economic growth (Mail et al., 2020). Within this economic framework, financial integration plays a pivotal role, representing the process of aligning financial markets across countries to foster greater connectivity (Eyraud et al., 2017; Ahmad & Rehman, 2019; Server, 2019; Roy & Madheswaran, 2020; Ali, 2022).

International financial integration facilitates the removal of barriers to capital flows between countries, encompassing direct investment, portfolio investment, inter-state payment systems, and cross-border bank credit flows (Rodrik, 2000; Mail et al., 2020). The dynamism of capital flow in integrated nations is influenced by macroeconomic factors such as Gross Domestic Product per capita, with considerations for risk factors like inflation and exchange rate volatility shaping investment preferences (Alotaibi & Mishra, 2014; Zubair & Hayat, 2020; Jammazi & Mokni, 2021). The components of financial integration cover the banking sector, liberalization of

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foreign direct investment, capital flow liberalization, and efforts toward regional financial stability. Undeniably, financial integration holds immense significance for various forms of investment (Mendoza et al., 2009).

A robust and stable financial system establishes the foundation for high capital accumulation, trade facilitation, and diverse portfolio options, encouraging the inflow of foreign capital. The complex relationship between financial integration and fintech credit, financial development remains a topic of ongoing discourse among national and international economic agencies. Addressing financial integration involves the reformation and enhancement of the financial system to optimize resource allocation and risk diversification (Stavárek et al., 2011; Ali & Sajid, 2020; Adjasi & Yu, 2021; Ahmad, 2022; Omri, 2022).

The landscape of global credit markets has witnessed a transformative shift, marked by the emergence of new digital lending models across many countries. As defined by Claessens et al. (2018), fintech credit encompasses various credit types facilitated for both consumers and businesses through online platforms, deviating from traditional banks or lending institutions. The expansion of fintech credit, characterized by decentralized platforms and diverse lending models, raises concerns about potential repercussions, given historical lessons on the adverse effects of excessive credit expansion (Kindleberger, 2015; Audi et al., 2022; Kallianiotis, 2022; Khan, 2022; Ali & Mohsin, 2023). The rapid growth of fintech credit necessitates a thorough evaluation of its implications.

Against this backdrop, the study addresses the evolving landscape of financial integration amid the growing influence of financial technology. It aims to investigate the roles of FinTech credit and bank regulations in shaping the level of financial integration, a topic that remains notably scarce in existing literature. The study sets forth specific objectives, including examining the impact of fintech credit and regulation, assessing the influence of bank regulation, investigating the role of remittances, evaluating the impact of State-Owned Enterprises, and exploring the relationship between financial development and financial integration. In the context of our globalized world, financial integration has become a critical determinant of economic growth and development, prompting widespread discussions among researchers. Open economies worldwide are strategically enhancing financial integration to bolster their economic growth (Olufemi, 2004; Berger & Humphrey, 1997; Ali, 2022; Zanden, 2023; Ustaoglu & Yildiz, 2023; Audi et al., 2023).

Empirical tests conducted by various researchers have explored the link between financial integration and economic growth (Bekaert et al., 2011; Amaira, 2016; Bekaert et al., 2005; Orji et al., 2015; Hassan et al., 2011; Keho, 2017; Audi et al., 2022; Munir et al., 2024; Sulehri et al., 2024). The advancement of technology and communication has revolutionized financial transactions and banking structures, prompting a shift towards online lending platforms when traditional banking systems face inefficiencies. Fintech credit platforms, with their screening and evaluating practices, offer a potential solution to issues of asymmetric information and may contribute to improved financial integration. Despite the transformative influence of fintech credit, there is a notable gap in the literature regarding its impact on financial integration, making this study a valuable contribution to the field.

Literature Review

Guru and Yadav (2021) empirically analyzed the impact of financial integration on the growth of Asian countries. Using data from 43 Asian countries (1995-2005), the study created an index of GDP, Growth on Capital Stock, and multiple productivity factors. The research revealed a positive and significant impact of financial integration on productivity, with some negative impacts associated with financial crises and financial openness. Le et al. (2021) investigated the relationship between fintech credit development and banking system efficiency, employing banking

efficiency as the dependent variable. Data from 2013 to 2017 for 80 countries were analyzed using the generalized method of movement, revealing a nuanced relationship where banking system efficiency initially marked comparatively low levels, with subsequent findings indicating a negative relationship between banking efficiency and fintech credit.

Padhan and Prabheesh (2021) surveyed and analyzed the evolution of globalization and financial integration. Utilizing data from 1980 to 2018, the study classified, measured, and detailed requirements for financial integration, emphasizing its critical role as a support system for globalization. The study highlighted the positive cushion financial integration provides to economic outcomes, emphasizing the potential for dramatic changes in international economic convergence through appropriate measures.

Liu and Lee (2021) explained the impact of international market financial integration on monetary policies in advanced and emerging economies. Using data from 1995 to 2018 for 23 emerging market economies and 19 advanced economies, the study concluded that emerging economies faced a trilemma in deciding optimal monetary policies, while advanced economies had limited authority due to strict financial integration policies.

Akbari et al. (2021) studied the methods of economic measurements and financial integration between developed and emerging economies. Employing data from 21 developed and 20 emerging market economies (1989-2015), the research revealed that financial integration is an ongoing process influenced by factors such as trade openness, economic development, production growth, and population increase. The study highlighted the challenges faced by emerging countries, such as high financial investment risk and slow-paced financial development. Alkhazaleh and Haddad (2021) examined how fintech services delivery affected customer satisfaction in the Jordanian banking sector. Using primary data and a chi-square test, the study considered variables like availability, accessibility, ease of use, performance, transaction cost, and service security to assess their impact on customer satisfaction.

Sethi et al. (2021) checked income imbalance in India due to financial development and the impact of globalization on financial development. Using data from 1980 to 2014, the study employed the ARDL approach and concluded that increased international financial development and globalization widened the income gap in emerging countries. The study highlighted factors like economic growth, globalization, price hikes, and illiteracy as contributors to income inequality. Ajide et al. (2021) empirically examined the relationship between inclusive growth, entrepreneurship, and economic globalization. Using data from 2006 to 2018 for 21 African countries, the study employed the generalized methods of momentum and granger causality test, finding significant and positive impacts of economic globalization and entrepreneurship on inclusive growth.

Awan et al. (2021) analyzed panel data to investigate the effects of financial development and financial globalization in Asian countries. Conducted on 22 Asian economies from 1998 to 2015, the study suggested that during the transition phase, nations should prioritize selective globalization to strengthen their institutions. Overall, financial globalization had a positive impact on economic output growth, although certain regions exhibited an insignificant relationship. Through financial integration, Eslamloueyan and Fatemifar (2021) investigated the impact of financial system instability and its determinants in Asia. Using panel data and the Generalized Method of Moments (GMM), their study found a bidirectional relationship between financial integration and instability. They observed that economic and financial instability prevented Asian countries from achieving full financial integration, thereby posing potential risks and challenges.

Berg et al. (2020) examined the rise of fintech credit scoring through digital footprints. The study examined dependent variables such as fintech, as well as independent variables such as order amount, gender, age, credit

bureau score, and payment behavior. Utilizing primary data from 2015 to 2016, the findings suggested implications for financial intermediaries' business models, access to credit for the unbanked, and the digital behavior of consumers, firms, and regulators. Kolokas et al. (2020) investigated venture capital credit and fintech start-up formation across different countries. The study examined dependent variables involving fintech start-ups, as well as independent variables including venture capital, private sector credit availability, control variables, deposit to GDP, and business market regulations. Using Dealroom.co data from 2009 to 2017, the study employed quantile regressions to provide insights into the intersection of research on National Innovation Systems (NIS) entrepreneurship and entrepreneurial finance, particularly in the context of the burgeoning fintech industry.

Razzaque and Hamdan (2020) delved into perceived precautionary savings motives evidenced by fintech. Consumption spending served as the dependent variable, while independent variables encompassed account age, big-ticket expenditure, card consumption, cash withdrawals, and deposits. Using primary data from 2015 to 2019 and employing descriptive statistics, the study identified substantial spending responses for users with high liquid savings, contrasting with limited reactions from those with minimal liquid savings. Hammudeh et al. (2020) empirically analyzed the relationship between economic growth, governance, and globalization variance. Investigating 116 countries from 1980 to 2015, the study employed the macroeconomic Solow Swan Model and ARDL Model, revealing that higher governance quality correlated with increased globalization. Financial development and stability also exhibited positive impacts on globalization, with additional analyses using the GMM approach and U-test reinforcing these findings.

Knight and Wojcik (2020) scrutinized the determinants of financial integration in ASEAN-5 countries, employing the model of Bhattacharya & Ghosh (2006). Using the Generalized Method of Moments and data from 2008 to 2017, the study concluded that all variables, except exchange rate fluctuation and domestic credit, significantly impacted financial integration in ASEAN-5 countries. It highlighted the importance of encouraging capital flow while acknowledging challenges posed by high inflation and exchange rate volatility. Goetz and Gozzi (2020) investigated the effects of economic activity inflow and outflow movements on financial integration in the United States. Adopting the model of Rajan and Zingales (1998) and regression analysis on cross-time and cross-state data from the FDIC, the study identified that increased financial integration between states positively impacted capital flow regularization, reduced shocks transmission to the banking sector, and aided in managing fluctuations in systemic bank stress. Cornelli et al. (2020) examined fintech and big tech credit using data from the global alternative finance database, the Cambridge Centre for Alternative Finance, and the World Bank (2015–2018). They considered fintech to be the dependent variable, with independent variables including GDP per capita, Lerner index, bank branches per 100,000 adults, and a normalized regulation index. The study offered a thorough analysis of the evolving fintech and big tech credit landscapes. Cheng and Qu (2020) investigated the effect of bank fintech on credit risk, using credit risk as the dependent variable and bank fintech as the independent variable. They gathered data from 2008 to 2017 for 60 commercial banks from the CSMAR database and Baidu search engine, concluding that bank fintech significantly reduced credit risk.

Firdous and Farooqi (2017) analyzed the impact of internet banking service quality on customer satisfaction. Through regression analysis, they identified efficiency, system availability, fulfillment, privacy, contact, responsiveness, and website design as key factors influencing customer satisfaction based on 194 valid responses out of 200. Kilinc et al. (2017) investigated how financial markets and the banking system influence the convergence process of the European monetary economic system. Using the Generalized Method of Moments and Dynamic

Panel Data Model on data from 1963 to 2012, they found a positive and significant impact of the financial market and banking sector on financial development in 15 European countries.

Navaretti et al. (2018) investigated the impact of fintech on banks, considering fintech to be a two-sided market. Using data from the World Bank and global financial inclusion databases (2011–2017), they concluded that fintech and banks operate in a multi-dimensional market, indicating that fintech companies offering financial services on retail investor platforms could potentially succeed. Boubaker et al. (2018) investigated how audit quality influences a firm's investment efficiency. Analyzing firm investment efficiency as the dependent variable, the study used data development analysis on *Worldscope* data (2008–2015) and highlighted that hiring the big four audit companies increased the likelihood of successful investments for firms with low investment.

Lee and Shin (2018) examined the investment decisions and challenges of fintech ecosystem business models. With fintech as the dependent variable and technology developers, financial customers, and traditional financial institutions as independent variables, the study pointed out the lack of research on various aspects of fintech, including social, regulatory, technological, and managerial dimensions. Ngo and Le (2019) explored the link between capital market development and bank efficiency. Using data from the World Bank (2006–2011), they found that easier access to credit improves bank performance, suggesting the banking sector should focus on overcoming market crises.

Jagtiani and Lemieux (2019) researched the impact of alternative technologies and machine learning in fintech lending. By using traditional banking channels and various databases, they discovered that nontraditional information from alternative data sources facilitated credit access for consumers with limited or inaccurate credit records. Siek and Sutanto (2019) investigated the evolving relationship between fintech and the banking industry, focusing on factors like customer satisfaction, net promotion score, promotion, and ease of use. Their study suggested that fintech was gaining an advantage over traditional banks for several reasons.

The Model

Existing literature highlights that financial integration has gained significant attention among policymakers over the past few decades, primarily due to its substantial impact on economic growth (Solow, 1956; Baumol, 1986; Romer, 1986; Mankiw et al., 1995). Capital typically flows from countries with an abundance of capital to those with a scarcity (Balassa, 1979; Kose et al., 2009; Vinokurov, 2017). A historical literature review indicates that Furstenberg (1998) was the first to introduce the concept of financial integration and its prerequisites. According to Furstenberg, financial integration should not be considered separately from a country's financial structure, which includes the institutions and markets that make up its financial system.

Financial integration is the process of interconnecting financial markets across nations and eliminating or significantly reducing barriers to portfolio investments in equity and debt, foreign direct investment, bank credit flows, and inter-state payment systems (Eyraud et al., 2017).

Several studies have explored the concepts of indirect, direct, semi-integrated, and total integration among countries (Guha et al., 2004). Kalemli-Ozcan et al. (2001) empirically demonstrated that capital market integration enhances production specialization through improved risk-sharing. Henry (2000a) examined the effect of international financial integration on domestic investment, while Henry (2000b) looked into financial liberalization in emerging markets. Obstfeld & Taylor (2003) provided a historical overview of financial integration and capital markets. Adam et al. (2002) analyzed capital market integration within the European Union, and Kose et al. (2003) investigated the

impacts of financial international integration on developing countries. Furstenberg (1998) suggests assessing financial integration in relation to fintech credit and bank regulations across countries. One can express the model's functional form as follows:

$$FING_{it} = f(FINTE_{it}, BR_{it}, BC_{it}, REM_{it}, STATE_{it}, CREDIT_{it})$$

FING= Financial Integration

FINTE= FinTech Credit

BR= Bank Regulations

BC= Bank Concentration

REM= Amount of Remittances

STATE= State Own Enterprise

CREDIT= Financial Development

i= Selected Cross-sections (selected developed and developing countries)

t= time-period (2013-2019)

For examining the relationship between the explanatory variables and explained variable, the mathematical model can be converted into the econometric model. The model can be written as:

$$FING_{it} = \alpha + \beta_1 FINTE_{it} + \beta_2 BR_{it} + \beta_3 BC_{it} + \beta_4 REM_{it} + \beta_5 STATE_{it} + \beta_6 CREDIT_{it} + U_{it}$$

where

α = intercept

β_i = slope coefficient

μ = white noise error term

Table 1: Measurement of Variables

Variables	Symbol	Definitions
Financial Integration	FING	Financial integration (FING is measured with the help of the financial governance index which is based on the assets and liabilities of the countries). The data source of financial integration is the KOF index of globalization. Financial integration is measured with the help of Foreign direct investment, Portfolio international debt, international reserves, and international income payments.
Fintech Credit	FINTE	Fintech and big tech lending, normalized by nominal GDP, demonstrate evolving financial dynamics. Originally decentralized, fintech lending now involves institutional investors and sophisticated credit models. Fintech primarily focuses on financial services, while big tech companies, with diverse business lines, integrate lending as a non-financial aspect (other than banks). The existing user base of big tech firms streamlines borrower onboarding in this changing landscape.
Bank Regulations	BR	Bank regulatory capital to risk-weighted assets % assesses deposit takers' capital adequacy, indicating the ratio of total regulatory capital to assets, weighted by asset risk. Note national differences limit comparability.
Bank Concentration	BC	Bank concentration is calculated as the share of total assets held by the three largest commercial banks, encompassing earning assets, cash, due from banks, and more. Utilizing Bankscope and Orbis data, the formula involves summing data for the three largest banks over all banks.
Amount of Remittances	REM	Personal remittances, received (current US\$) encompass personal transfers and compensation of employees, representing all current transfers in cash or kind between resident and nonresident individuals. Data, in current U.S. dollars, include income of nonresident workers and residents employed by nonresident entities.
State Owned Enterprises	STATE	We calculate the credit to the government and state-owned enterprises as a percentage of GDP. We calculate this ratio by dividing the credit that domestic monetary banks provide to the government and state-owned enterprises by the GDP. We source the raw data for this calculation from the IMF's International Financial Statistics (IFS), specifically using lines 22a, 22b, and 22c. We use lines FOSAG, FOSAOG, and FOSAON when these lines are unavailable. We obtain the GDP in local currency from IFS (line NGDP).
Financial Development	CREDIT	Financial development: Domestic credit to the private sector (% of GDP) represents financial resources provided by financial corporations to the private sector, including loans, securities purchases, and trade credits. Data include claims for repayment from monetary authorities, deposit money banks, and other financial entities.

Results and Discussion

Descriptive statistics, shown in Table 2, analyze the intertemporal properties of selected variables. Financial integration, fintech credit, bank regulation, bank concentration, remittance amount, state-owned enterprises and financial development exhibit positive skewness and kurtosis. For instance, financial integration has a mean of 51.95, median 47.46, maximum 96.84, and minimum 26.65. These results indicate the reasonable intertemporal properties of the data, supporting further analysis.

Table 2: Descriptive Statistics

	FING	FINTE	BR	BC	REM	STATE	CREDIT
Mean	51.94568	0.210803	16.93397	56.77923	2.334364	14.90084	68.80504
Median	47.46075	0.030538	16.65670	55.78291	0.895740	10.71450	48.79402
Maximum	96.84293	4.388770	26.97260	100.0000	11.55865	72.41070	190.7560
Minimum	26.65277	9.82E-06	7.873240	22.75550	0.000000	0.054931	5.636719
Std. Dev.	16.59272	0.611611	3.649960	20.88199	2.868343	13.13030	55.71959
Skewness	0.841377	5.342737	0.436780	0.285984	1.492421	2.049460	0.620871
Kurtosis	2.959085	34.11336	3.172211	1.960008	4.475036	7.602041	1.912665
Jarque-Bera	21.60420	8251.931	6.044817	10.74156	84.52326	289.5969	20.77220
Sum	9506.060	38.57700	3098.916	10390.60	427.1885	2726.854	12591.32
Sum Sq. Dev.	50107.92	68.08033	2424.642	79362.47	1497.386	31377.65	565050.5

The correlation matrix is shown in Table 3, the correlation matrix highlights the Financial integration, fintech credit, bank regulations, bank concentrations, remittances, state owned enterprises and financial development. There is no higher correlation among the explanatory variables, which raises the problem of multicollinearity among the chosen independent variables.

Table 3: Correlation Matrix

Variables	FING	FINTE	BR	BC	REM	STATE	CREDIT
FING	1.000000						
FINTE	-0.056039	1.000000					
BR	0.034460	-0.047097	1.000000				
BC	0.109738	-0.119546	0.007255	1.000000			
REM	0.005191	-0.041319*	0.025687	0.064126	1.000000		
STATE	-0.003070	0.118602*	-0.1986***	0.059582	-0.14472*	1.000000	
CREDIT	0.346167***	0.228991***	-0.1911***	-0.01350	-0.368***	0.308254***	1.000000

***, **, * 1 percent, 5 percent, and 10 percent respectively.

The study utilized the Generalized Method of Moments (GMM) due to endogeneity issues, with results presented in Table 4. Financial services have evolved to include robotic financial services, non-cash encrypted platforms, crowdfunding platforms, financial advice, and technical support through virtual means (Dapp, 2014; Manta, 2018;

Suprun et al., 2020). Global FinTech investment has reached \$22.3 billion (Cortina, 2018) and continues to grow daily. FinTech is expanding rapidly, positively affecting financial services in underserved areas, and reducing financial risk. Risks for financial intermediaries include loan losses, rising costs, and the challenge of identifying low-risk borrowers. Systemic risks undermine the contractual and informational framework for financial services amid unstable macroeconomic conditions (Bobtcheff et al., 2016). Idiosyncratic risks involve agency problems between borrowers and lenders. Financial institutions' inability to manage costs and risks limits financial services in developing countries (Pomeroy et al., 2020). High transaction costs and a lack of knowledge about formal documentation leave many low-income individuals unbanked (Demirgüç-Kunt & Klapper, 2013). Our findings indicate that FinTech credit significantly enhances financial integration, demonstrating the impact of rising awareness and usage of these services (Anagnostopoulos, 2018). The relationship between financial integration and FinTech remains an underexplored research area.

In developed countries, financial institutions and markets are well-equipped to serve local, national, and international customers simultaneously (Alp & Ustundag, 2009). National regulations safeguard domestic customers and guarantee the achievement of market and institutional goals. Bank regulations for financial integration involve reducing direct and indirect legal barriers (Kaijage & Nzioka, 2012). Direct barriers may include prohibiting cross-border capital flows and international banking. Operational restrictions, such as exchange controls and limits on foreign firms' market presence, are more common (Millstein & Katsh, 2003). Legal diversity has indirect economic effects on international finance. Incomplete integration is often due to varying national banking laws and regulations (Wakeman-Linn & Wagh, 2008). Legal diversity significantly hinders financial regulation convergence, even though conflicting regulations also affect non-financial international transactions. Our results indicate that bank regulations have a positive but insignificant impact on financial integration among selected countries, likely due to the comprehensive and diverse nature of financial laws and regulations (Amstad, 2019; Lee, 2020; Ali, 2022). Financial market liberalization has led to some legal convergence, but it remains limited (Rhodes & Apeldoorn, 1998).

Financial systems play a crucial role in economic growth, as widely acknowledged (Alfaro et al., 2004; Afonso et al., 2005). Numerous models suggest that financial intermediation fosters growth by creating liquidity, diversifying risk, and reducing informational asymmetries (Petrovito, 2009). Traditional views suggest that bank concentration negatively impacts financial markets by reducing competition and access to credit, which hampers economic growth (Cetorelli & Gambera, 2001; Claessens, 2009). Our results show that bank concentration negatively affects financial integration, with a one percent increase in bank regulation reducing financial integration by 0.227905 percent. Some studies argue that monopolistic banks can better manage informational barriers, facilitating credit flow to worthy enterprises (Demirguc-Kunt & Levine, 2000; Hamadi & Awdeh, 2020). Bank concentration may also improve efficiency through scale, organization, and product mix (Berger et al., 2004). This indicates a complex relationship between bank concentration and financial integration.

Policymakers have increasingly focused on the macroeconomic impact of remittances. For many developing countries, remittances are a significant revenue source, with some countries receiving over 20 percent of GDP (Gammeltoft, 2002; Pradhan et al., 2008). Remittances influence economic growth, income equality, poverty reduction, and financial integration (Gustafsson & Makonnen, 1993; Dustmann & Kirchkamp, 2002; Edwards & Ureta, 2003; Adams, 2006; Acosta et al., 2006). Initiatives in countries like Mexico and Pakistan aim to increase remittance inflows by reducing costs (Ratha, 2013), thereby enhancing financial integration. Our results show that

a one percent increase in remittances boosts financial integration by 1.490,450 percent. This suggests that larger remittance flows enhance financial integration, reducing liquidity constraints and fostering investment (Calero et al., 2009; Ngoma & Ismail, 2013; Acharya & Leon-Gonzalez, 2013). Remittances can act as collateral for borrowing, particularly in developing countries with limited banking development (Chatterjee & Turnovsky, 2018; Kakhkharov & Rohde, 2020), promoting investment in human capital, small businesses, and infrastructure, and contributing to overall financial integration (Mendoza et al., 2009).

State-owned enterprises (SOEs) are government-owned business activities (Koppell, 2007; Capobianco & Christiansen, 2011). Governments run these businesses like private investors, but they aim for public welfare, which is often an elusive goal. Despite the decline of SOEs post-USSR, many developing economies still rely on them. The inefficiency of SOEs contributed to the USSR's downfall. SOEs typically have low profitability, liquidity, and financial independence, burdening government budgets. Our results show that SOEs negatively impact financial integration, with a one percent increase in SOEs reducing financial integration by 0.364088 percent. This suggests that increasing SOEs discourages both domestic and foreign investment, reducing financial integration.

King and Levine (1993), in the early 1990s, highlighted the significant impact of financial development on macroeconomic conditions. Literature indicates that financial development influences financial integration, with international capital mobility increasing substantially from 1970 to 1990 (Aziakpono, 2005). This trend has fostered financial integration. Our results indicate that financial development positively impacts financial integration, with a one percent increase in financial development enhancing integration by 0.146543 percent. Studies by Aghion et al. (1999, 2000) and others support these findings, showing that domestic financial development positively affects international financial transactions, consistent with our results (Beck et al., 2001; Caballero & Krishnamurthy, 2001; Leblebicioglu, 2005; Broner & Ventura, 2005; Odhiambo, 2008).

Table 4: Panel Generalized Method of Moments

Dependent Variable: FING				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
FING(-1)	0.544738	0.054698	9.959030	0.0000
FINTE	2.044932	0.490507	4.169015	0.0001
BR	0.323346	0.270759	1.194220	0.2350
BC	-0.227905	0.089893	-2.535281	0.0127
REM	1.490450	0.419720	3.551056	0.0006
STATE	-0.364088	0.143060	-2.545009	0.0124
CREDIT	0.146543	0.069327	2.113780	0.0369
Effects Specification				
Cross-section fixed (first differences)				
Mean dependent var	-0.582963	S.D. dependent var		8.751662
S.E. of regression	10.44612	Sum squared resid		11676.00
J-statistic	18.30393	Instrument rank		21
Prob(J-statistic) 0.193287				

Conclusions

This study draws key conclusions from estimated results, revealing that FinTech credit significantly supports financial integration by enhancing domestic and international transactions. The positive impact stems from technological advancements expediting financial processes. Bank regulations exhibit a positive, although insignificant, influence on financial integration. Conversely, bank concentration displays a significant negative impact, as heightened wealth concentration prompts reduced foreign linkages. Remittances contribute positively and significantly to financial integration, attributed to their association with liberalized capital movements. State-Owned Enterprises (SOEs) exert a negative and significant impact, diminishing investor confidence and impeding financial integration. Financial development emerges as a robust driver, positively and significantly influencing business activities and reinforcing financial linkages among countries. In summary, FinTech credit, remittances, and financial development foster financial integration, while bank concentration and SOEs hinder integration among nations.

Policy Suggestions

This study offers policy recommendations for enhancing financial integration. FinTech credit positively impacts integration, emphasizing the need to promote technological financial services through educational initiatives. Although bank regulations exhibit a positive, but insignificant, influence, further enhancements are crucial for robust financial integration. Bank concentration negatively affects integration, urging countries to foster financial competition among institutions. The study advocates incentivizing remittances through benefits like lower taxes to boost international transactions. Discouraging State-Owned Enterprises (SOEs) and promoting stable financial conditions are essential for integration. Financial development positively correlates with integration, emphasizing the importance of facilitating credit access for domestic and international investors.

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