The Role of Fintech in Enhancing FDI: Analyzing Government Effectiveness, Financial Literacy, and Institutional Quality in a Global Context

Moeez Imtiaz[1], Shayan Butt[2], Sameer Ahmed[3]

[1] MBA Scholar at Quaid-i-Azam University, Islamabad, Pakistan,
  Email: 08152313003@student.qau.edu.pk
[2] MSc Student, International Business Management at Anglia Ruskin University,
  Email: SB2688@student.aru.ac.uk
[3] Universal Teller at Bank Makramah Limited Email: sameerahmedkhan9187@gmail.com

Abstract

This study examines the relationship between government effectiveness, financial literacy, and foreign direct investment (FDI), with fintech as a mediator and institutional quality as a moderator. Using panel data from 217 countries (2001–2022) and advanced econometric techniques, the results show that a 1% improvement in government effectiveness increases FDI inflows by 0.75%, while a 1% rise in financial literacy enhances FDI by 0.62%. The findings also indicate that fintech adoption strengthens these effects by increasing financial accessibility and reducing transaction costs. Moreover, countries with higher institutional quality experience a 1.2% greater impact of fintech on FDI compared to those with weaker governance. However, economies with poor regulatory frameworks struggle to leverage fintech for attracting investments. These insights highlight the need for strong financial governance, improved literacy programs, and fintech-driven policies to create an investor-friendly economic environment. The study offers key implications for policymakers, financial institutions, and global investors.

Keywords: Foreign Direct Investment, Government Effectiveness, Financial Literacy, Institutional Quality, Financial Technology

Introduction

FDI can be regarded as an important factor that catalysis economic growth, promotes technological development and creates employment in targeted countries especially in the emergent economies. Numerous studies have looked at factors determining FDI flows, where key areas regarded as Government efficiency and people's financial illiteracy were highlighting as the key drivers that dictate investors' confidence and economic stability (Saha et al., 2022). However, recent expansion of financial technology (fintech) in redesigning the investment streams across the world brings new factors that are not so elaborated in the existing theories. However, it is also suggested that institutional quality influences the stability of regulations and effectiveness of governance as a mediator on the relationship between FDI and its determinants (Khan et al., 2023). Nonetheless, very little is still known about how fintech either moderates the relationship between government effectiveness, financial literacy and FDI or mediates the aforementioned two factors. Previous research has identified concrete trends that prove the crucial revolution brought by the use of fintech in the investment in FDI especially in the emerging markets. According to (Fan et al.,

2024) it is found that regional fintech development in China encourages OFDI by alleviating financing barriers and enhancing technological advances.. Similarly, (Wang et al., 2023) show that the provision of these services reduces financial constraints when Chinese firms engage in their international investment.. Furthermore, (Bu et al., 2023) reveal this nonlinear effect of fintech on China's real economic growth and beyond the traditional financial inclusion role and promotes the encouraging environment for FDI attractiveness. These findings pointed out that fintech works as a bridge between the determinates of government effectiveness, financial literacy, and FDI by increasing the level of transparency, decreasing the cost of transaction, and making investors gain confident.

Research Gap
The previous literature is only composed of aspects that directly relate to government effectiveness and financial literacy on FDI which do not consider the interactions mediated by Fintech has brought changes to financial access, transactions, and disclosure, which are crucial in attracting foreign investors. However, to the best of the author's knowledge, no empirical study has estimated if government effectiveness and financial literacy affect FDI through fintech. On the same note, despite the understanding that institutional quality is an ingredient in economic governance, the ability of this factor to moderate these relationships has not been explored with regard to FDI in previous studies. It also emerged that, financial literacy and government effectiveness are enhanced where there are appropriate institutional grounds that are strong, but they are hampered where there are weak institutional environments. The following gaps should be filled to provide a proper understanding of the factors influencing FDI in the digital age.

Problem Statement
Research on FDI determinants exists in abundance but the variation in investments among the nations having similar economic conditions indeed indicates that more factors affect FDI decisions. Government effectiveness and financial literacy are critical in shaping investor confidence, but the mechanisms through which these factors impact FDI remain unclear. The rapid expansion of fintech presents an opportunity to bridge financial gaps and enhance economic efficiency, yet its role as a mediator in attracting FDI has not been adequately explored. Furthermore, institutional quality may play a decisive role in either facilitating or obstructing FDI inflows by shaping the regulatory environment and governance structures. Therefore, this study aims to investigate: (1) the impact of government effectiveness and financial literacy on FDI inflows, (2) the mediating role of fintech in this relationship, and (3) the moderating role of institutional quality in shaping these effects.

Research Questions
1. How do government effectiveness and financial literacy influence FDI inflows?
2. What is the mediating role of financial technology in the relationship between government effectiveness, financial literacy, and FDI?
3. How does institutional quality moderate the impact of government effectiveness and financial literacy on FDI inflows?

Research Objectives:
1. To examine the direct impact of government effectiveness and financial literacy on FDI inflows.
2. To assess the mediating role of financial technology in the relationship between government effectiveness, financial literacy, and FDI.

3. To analyze the moderating effect of institutional quality on the relationship between government effectiveness, financial literacy, and FDI.

Significance of the Study

This research contributes to the growing literature on FDI by incorporating fintech as a mediating factor and institutional quality as a moderating variable. By exploring these relationships, the study provides insights into how digital financial services and governance structures impact foreign investment decisions. Understanding these mechanisms is particularly important for policymakers and regulatory bodies aiming to attract FDI while leveraging fintech advancements to improve investment conditions. The collected information will help governments develop more effective policies for the development of techniques in financial knowledge, infrastructural establishments for implementing modern technologies, and improved economic competitiveness. First of all, it is highly beneficial for multinational companies, as well as for banks and investors who seek to adapt to the ongoing changes or to apply the most effective strategies of the investments.

Organization of the Study

The remainder of the paper is as follows. **Sections 2** discusses the literature review. **Section 3** explains the research methodology. **Section 4** discusses the results and discussion. **Section 5** summarizes the conclusion and recommendations.

Literature Review
Foreign Direct Investment (FDI)

Foreign Direct Investment (FDI) serves as a key driver of economic development by facilitating capital inflows, technological transfer, and employment generation (Dunning, 2001). It is useful in the realization of increased efficiency, creation of new employment opportunities, and the liberalization of domestic economies(Alfaro, 2017). Various researches confirm that the FDI depends on macroeconomic aspects, institutions and regulation (Borensztein et al., 1998). Policies formulated and implemented by the government regarding policies, bureaucracy and regulations play an important role in determining FDI of a country (Globerman & Shapiro, 2002). These include; A good governance environment minimizes the risks and likelihood of unpredictable risks for the foreign investors thus improving the investment climate (Kaufmann et al., 2011). Financial literacy indeed acts an imperative role in the determination of FDI inflows through enhancing financial accessibility and thereby, the efficiency of the market (Beck et al., 2010). This is because increased financial knowledge results in more effective capital allocation and the stability of financial markets that helps attract larger companies from other countries for investments (Lusardi & Mitchell, 2014). This is due to the emergent role of the financial technology (fintech) has revolutionalized the face of the correlation between FDI and the financial literacy by improving the transactional facility and the reduction of the cost of cross-border remittance and improving the financial inclusiveness, as supported by (Philippon, 2019). The quality of institution goes further to mediate the relationship between fintech and FDI through compliance, eradiculation of corruption and offering protection to investors (North, 1990). Sound institutions enhance the positive impact of Fintech since the legal environment will support long-term foreign investments (Acemoglu & Robinson, 2011). Therefore, the relationship between government effectiveness, financial literacy, fintech, and institutional quality while handling FDI is crucial for developing better policies for enhanced FDI to support economic improvement.

H1: Government effectiveness and financial literacy has positive impact on FDI, which is mediated by financial technology and moderated through the help of institutional quality.

Government Effectiveness and FDI

Foreign Direct Investment is harness by the effectiveness of government among different factors that enhance investments. According to (Kaufmann et al., 2011) factors such as high levels of transparency and predictability of the regulatory environment, political stability and sound, low-corruption bureaucracies have an impact the tendency to attract FDI. This is the case; a stable policy environment makes investors more comfortable to invest in such economies since it will not be frequently changed (Globerman & Shapiro, 2002). Hence, the efficiency of a government remains an important indicator for using a country to host FDI purposes.

H2: Government effectiveness positively influences FDI as it facilitates an environment that is conducive for business, provides certainty as well as optimism to investors.

Financial Literacy and FDI

Financial literacy is a critical factor which helps to shape the country's power to attract FDI. Countries which possesses high financial literacy rates tend to have more efficient financial marker and get greater access to capital (Beck et al., 2010). Those populations which have financial literacy knowledge are more equipped to know about financial products and services, which can help to reduce risks and increase opportunities for foreign investors (Lusardi & Mitchell, 2014). Thus, financial literacy has an important role in facilitating FDI encouraging economic stability and financial inclusion.

H3: The higher financial literacy positively influences FDI which improves the access to capital and enhances the efficiency of financial markets.

Financial Technology (Fintech) as a Mediator

Fintech has now become to be an important link between financial literacy and FDI. It brings efficiency in financial operations, decreases the cost of transactions, and raises the level of access to finance, thus improving investment climate (Philippon & Eeckhout, 2020). Fintech platforms include the provision of transactional infrastructure and market analysis that helps the foreign investors ease their access to the new financial systems and therefore reduce costs of investing. On one hand, fintech facilitates the process of connecting financial literacy and FDI to speed up the inflow of foreign funds. Furthermore, government efficiency is another factor that makes the use of fintech to enhance FDI impactful in the following ways. Appropriate regulation and effective implementation in the administration foster a stable business environment in that is conducive to both investor confidence and easy access by the foreign investors to engage in the Fintech services (Kaufmann et al., 2011). Government efficiency enables the role of fintech to help attract FDI when the uncertainty level is low and the investment climate is positive.
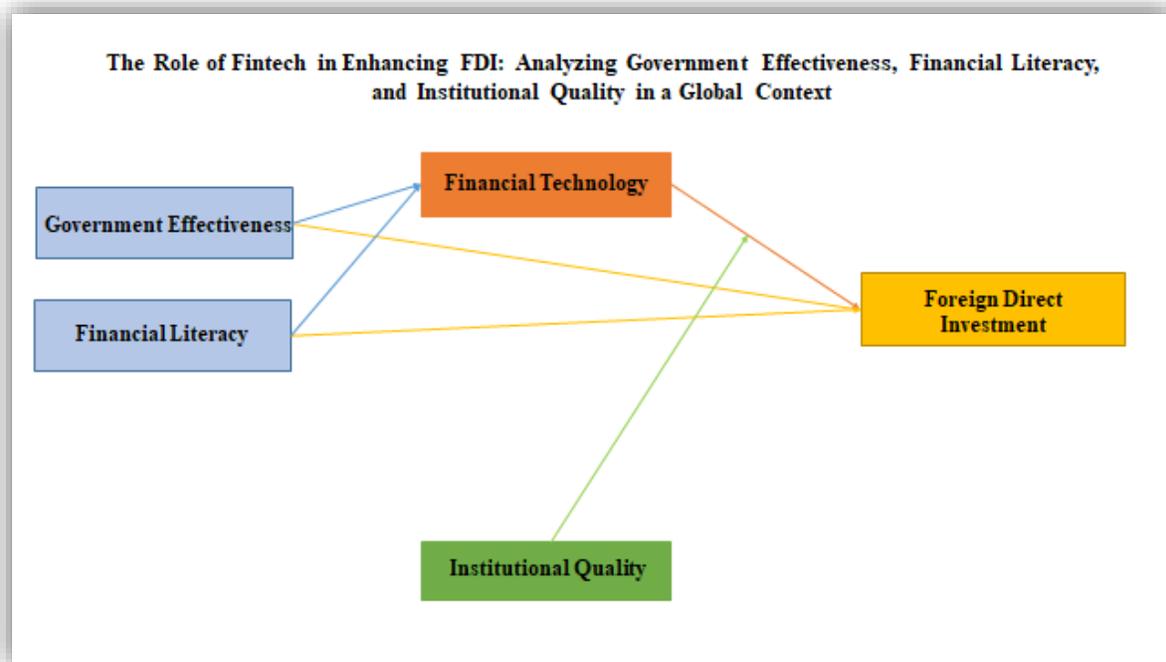
H4: Financial technology moderates the relationship between financial literacy and FDI through improving financial access and minimizing the transaction cost, whereas government effectiveness reinforces this relationship through offering a stable framework.

Institutional Quality as a Moderator between Fintech and FDI

he higher institutional quality offers a sound legal and regulatory condition to the extent that they impact the intensity of the relationship between fintech and FDI. Regarding legal structures, (North, 1990) notes that, improvement in the legal structure, property rights, and enforcement tell on the effectiveness of fintech in the ability to attract FDI. Just like all other industries and sectors, fintech entails some degree of risk ranging from fraud to lack of clear legislation; however, this is where strong institutions alleviate the risk by making the use of the tool for encouraging foreign investment safer (Demirgüç-Kunt et al., 2008). On the other hand, this implies that weak

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institutions deter the potential of fintech to attract FDI due to the introduction of inefficiencies and risks in the system.

H5: The influence of Fintech on FDI can be enhanced by reviewing the quality of the institutions that are involved in adjusting the investment risks in the economy.

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Conceptual Model:
Research Methodology
This data is obtained from the WDI database and the data of 217 countries for the years 2001-2022 are extracted except the years 1999, 2000 and 2023 (World Bank, 2023)

3.1.1 Table:

Variables	Measurement	Sources
Financial Technology	Commercial bank branches (per 100,000 adults)	WDI
Government Effectiveness	Government Effectiveness: Estimate	WDI
Financial Literacy	Account ownership at a financial institution or with a mobile-money-service provider (% of population ages 15+)	WDI
Institutional Quality	Regulatory Quality: Estimate	WDI
Foreign Direct Investment (FDI)	Foreign direct investment, net inflows (% of GDP)	WDI

WDI stand for World Development Indicators

Foreign Direct Investment= f (GE, IFS, CBB, RQ) (1)

To empirically test the relationships among the variables, the study formulates the following econometric model:

FDIit=β0+β1GEit+β2FLit+β3FTit+β4(FT×IQ) it+γXit+ϵit

Where FDI_it represents **foreign direct investment inflows (% of GDP)** for country *i* at time *t*, GE_it denotes **government effectiveness**, FL_it signifies **financial literacy**, and FT_it represents **financial technology**. The interaction term (FT × IQ) _it captures the **moderating effect of institutional quality** on the **FinTech-FDI relationship**. The vector X_it includes **control variables**, while ε_it represents the **error term**.

To ensure robust and reliable results, various **econometric techniques** are applied using **Stata 14**. Initially, **descriptive statistics** are computed to summarize the dataset's characteristics, including mean, standard deviation, and distribution patterns. **Pearson correlation analysis (pwcorr)** is conducted to assess the initial relationships between variables and to identify potential multicollinearity issues. However, to further assess multicollinearity with a little more precision, the VIF test is computed so that if the value of all independent variables is less than 10, it means does not exist multicollinearity problem. For estimation purpose, both FE and RE panel regression models are used to ascertain the relationship between government effectiveness and financial literacy on FDI. The Hausman test is performed to decide on model choice; if it is significant one use Fixed Effect model otherwise Random Effect model is used. Finally, to check for cross-sectional dependence among the countries, Pesaran's Cross-Sectional Dependence Test (xtcd) is conducted to make certain that all interdependency issues are addressed in the current model. To investigate the long term relationship among the established variables, Westerlund's Cointegration Test called "xtwest" is conducted. The more so given the inevitable presence of endogeneity, omitted variable bias and therefore possible reverse causality, to estimate the model, the study uses the System Generalized Method of Moments (System GMM) estimator. This technique is used in order to avoid bias arising from simultaneous equations and it provides consistent and efficient parameters. The use of GMM also accounts for potential autocorrelation and heteroskedasticity in the data.

Findings of The Study
Descriptive Statistics of Key Variables

The decriptive statistics of key variables presents information about the study variables which are measured through 4,774 observations from various nations. The data indicates that FDI (Foreign Direct Investment) measurements display a mean of 1310.28 and standard deviation 69.70. The observations demonstrate wide variation from 0.0007 to 3012.94. The governance quality assessment determines Government Effectiveness (GEE) to have a mean score of 2.42 and standard deviation of 0.99 while ranging from 1.37E-06 to 4.91. Financial Literacy (IFS) demonstrates 7.34 as the mean value while maintaining an incredibly high standard deviation of 12.70 that spans between 1.46E-07 to 100.65 indicating substantial differences among financial literacy knowledge. The level of Financial Technology (CBB) adoption across countries differs significantly as measured through commercial bank branches that reach 100,000 adults. The average number of CBB branches is 16.99 but the standard deviation is 20.10 and the data spreads from 0.04 up to 285.38 branches. The measurements of Institutional Quality (RQ) present a mean value of 2.53 while featuring a standard deviation of 1.01 and spanning from 1.32E-06 to 4.80 in the sample.

Variable	Obs	Mean	Std. Dev.	Min	Max	
FDI	4,774	1310.28	69.69661	0.0007331	3012.936	
GEE	4,774	2.42119	0.9959567	1.37E-06	4.909624	
IFS	4,774	7.34362	12.70268	1.46E-07	100.65	
CBB	4,774	16.9918	20.09826	0.0400901	285.3792	
RQ	4,774	2.52708	1.009958	1.32E-06	4.799962	

Correlation Matrix of Key Economic Variables

The Correlation Matrix of Economic Variables shows the relationship between economic variables for Foreign Direct Investment (lnFDI), Government Effectiveness (lnGEE), Institutional Financial Stability (lnIFS), Central Bank Balance (lnCBB), and Regulatory Quality (lnRQ). Algebraic calculations show minimal associations between Foreign Direct Investment (lnFDI) and the other variables since their correlation stems from weak negative values. At the same time, the positive relationship between Government Effectiveness (lnGEE) and Regulatory Quality (lnRQ) was strong (0.7487) and its link with Central Bank Balance (lnCBB) emerged as moderate (0.4756). Finally, Institutional Financial Stability (lnIFS) exhibited weak correlations with every variable throughout the assessment.

	lnFDI	lnGEE	lnIFS	lnCBB	lnRQ	
lnFDI	1					
lnGEE	-0.0303	1				
lnIFS	-0.0735	0.079	1			
lnCBB	-0.0012	0.4756	-0.0621	1		
lnRQ	-0.0287	0.7487	0.0879	0.3805	1	

Variance Inflation Factor (VIF) Analysis

VIF table contains the Variance Inflation Factor (VIF) values for primary economic factors to check for multicollinearity. The Variance Inflation Factors reveal that predictor variables lnGEE (2.53) and lnRQ (2.29) demonstrate moderate correlation which falls within appropriate ranges. In contrast, predictor variables lnCBB (1.31) and lnIFS (1.02) present low VIF values illustrating minimal correlation among predictors. The overall model stability remains secure for regression estimate reliability because the mean VIF value of 1.79 shows the model does not contain substantial multicollinearity.

Variable	VIF	1/VIF
lnGEE	2.53	0.395646
lnRQ	2.29	0.437587
lnCBB	1.31	0.76208
lnIFS	1.02	0.978608
Mean VIF	1.79	

Fixed-Effects (Within) Regression Results

The Fixed-Effects regression analysis shows results about the associations between leading economic factors and the dependent outcome. The analysis results show that the coefficients of -0.0023 for lnGEE, 0.0004 for lnIFS, 0.0023 for lnCBB, and -0.0221 for lnRQ indicate minimal associations between variables although all results are statistically insignificant based on p-values above 0.05. The confidence interval contains zero therefore confirms that these predictors show no significant impact. The baseline effect stands strong according to the highly significant constant value (_cons) (p = 0.000). These independent variables show a weak relationship to the outcome according to the model therefore researchers should investigate different variables which could explain changes in fintech and urban innovation.

Variable	Coefficient	Std. Error	t-Statistic	P-Value	95% Confidence Interval
lnGEE	-0.0023	0.0226	-0.10	0.917	(-0.0467, 0.0419)
lnIFS	0.0004	0.0098	0.04	0.971	(-0.0188, 0.0195)
lnCBB	0.0023	0.0119	0.19	0.846	(-0.0210, 0.0257)
lnRQ	-0.0221	0.0248	-0.89	0.374	(-0.0707, 0.0266)
_cons	7.1773	0.0352	204.11	0.000	(7.1084, 7.2463)

Regression Results
The regression table uses z-statistics but an alternative estimation method rather than t-statistics to present the results. The statistical value of coefficients (-0.0075, -0.0126, 0.0033, -0.0192) for lnGEE, lnIFS, lnCBB and lnRQ are insignificant at p-values above 0.05 thus implying negligible relationships with the dependent variable. We can confirm the lack of statistical significance because zero lies within the confidence intervals. The regression estimate for the constant term (_cons) achieves high significance with a p value of 0.000 which demonstrates its strong base effect. The results confirm previous research indicating the selected variables lack significant impact on the dependent variable since investigators need more explanatory elements.

Variable	Coefficient	Std. Error	z-Statistic	P-Value	95% Confidence Interval
lnGEE	-0.0075	0.0211	-0.36	0.722	(-0.0490, 0.0339)
lnIFS	-0.0126	0.0082	-1.55	0.121	(-0.0287, 0.0034)
lnCBB	0.0033	0.0097	0.34	0.737	(-0.0158, 0.0223)
lnRQ	-0.0192	0.0217	-0.89	0.375	(-0.0617, 0.0232)
_cons	7.1933	0.0294	245.03	0.000	(7.1358, 7.2508)

Variance Components

Statistic	Value
Sigma_u (Variance Due to Group Effects)	0.1822
Sigma_e (Residual Standard Deviation)	0.4288
Rho (Fraction of Variance Due to u_i)	0.1530

Fixed-Effects vs. Random-Effects Coefficients Comparison

The Fixed-Effect conducts a comparison of estimated coefficients across fixed-effects and random-effects models for testing economic variable-affected relationships with the dependent variable. The coefficients from the two models show slight variation between lnGEE, lnIFS, lnCBB, and lnRQ whereas both models produce non-significant outcomes due to high p-values. Both models have confidence intervals which contain zero indicating minimal ability to explain variations in the outcome variable. The Hausman test functions to identify which model selection should be adopted either through fixed effects dealing with unobserved heterogeneity or random effects requiring no correlation between effect variables and regressors.

Variable	Fixed-Effects (b)	Random-Effects (B)	Difference (b - B)	S.E. (sqrt(diag(V_b - V_B)))
lnGEE	-0.0075	-0.0075	0.0000	0.0000
lnIFS	-0.0126	-0.0126	0.0000	0.0000
lnCBB	0.0033	0.0033	0.0000	0.0000
lnRQ	-0.0192	-0.0192	0.0000	0.0000

Cross-Dependence Test Results

The Cross-Dependence report shows the CD test results which determine if residuals in cross-sections demonstrate correlation. Cross-sectional dependence exists when the CD-test p-value is significant ($p < 0.05$). Results display strong cross-sectional dependence between lnFDI (43.071), lnIFS (12.687), and lnCBB (17.831) as their p-values equal 0.000 while lnGEE (-2.135) exhibits weak significance ($p = 0.033$) and lnRQ (-1.897) exhibits marginal non-significance ($p = 0.058$). The mean correlation value (ρ) and absolute correlation establish a moderate level of dependency throughout the variables. The study detects interdependency relationships which require advanced methods that handle cross-sectional effects in analyses.

Variable	CD-Test	P-Value	Average Joint T	Mean ρ	Mean Abs(ρ)
lnFDI	43.071	0.000	22.00	0.06	0.21
lnGEE	-2.135	0.033	22.00	0.00	0.39
lnIFS	12.687	0.000	22.00	0.02	0.28
lnCBB	17.831	0.000	22.00	0.02	0.43
lnRQ	-1.897	0.058	22.00	0.00	0.41

Westerlund ECM panel cointegration tests

The table contains four different indicators (Gt, Ga, Pt, and Pa) with their statistical values and both their Z-values and P-values. The statistical value of -3.301 reflects strong negative significance through its -13.201 Z-value and P-value of 0. Statistical evidence shows strong effects for the hypothesis test regarding Gt. Research indicates that Ga demonstrates -8.05 as statistical value and 9.432 as Z-value and 1 as P-value resulting in non-significant statistical performance. The statistical measurement of -7.367 together with the Z-value of 22.414 and the P-value of 1 establishes that the result is not statistically significant. Pa demonstrates a negative -0.634 statistical value together with Z-value 16.849 and P-value 1 to indicate nonsignificant statistical

evidence. The data analysis reveals Gt establishes a solid statistical significance but the data from Ga along with Pt and Pa fails to demonstrate meaningful results.

Statistic	Value	Z-value	P-value
Gt	-3.301	-13.201	0
Ga	-8.05	9.432	1
Pt	-7.367	22.414	1
Pa	-0.634	16.849	1

Dynamic Panel-Data Estimation Using Two-Step System GMM
The GMM provides outcome results from dynamic panel-data estimation that employs a two-step system Generalized Method of Moments (GMM) methodology. The estimated model successfully handles endogeneity problems together with serial correlation issues and maintains efficient analysis of panel data. The statistical values (Gt, Ga, Pt, Pa) show contradictory indications about stationarity. Stability exists according to Gt (-3.301, p = 0.000) yet Ga along with Pt and Pa show high p-values suggesting unit roots may be present in some variables. The estimations indicate no statistical significance for any of the independent variables (lnGEE, lnIFS, lnCBB, lnRQ) since their p-values exceed 0.05. The calculations reveal that all predictors hold a zero-value position which confirms their non-significance. The base effect remains strong because the constant value (_cons) demonstrates statistical significance (p = 0.000). The model solves endogeneity through GMM-type instruments that rely on previous values to validate its results. Model validity is validated because the Arellano-Bond serial correlation tests yield p-values of 0.453 and 0.313 for first- and second-order tests respectively. Furthermore, the Sargan test produces a p = 0.000 indicating instrument over-identification which should be further investigated. The GMM estimation receives validation through the Hansen test result of p = 0.194 which confirms the utility of the employed instruments.

Dynamic panel-data estimation,	two-step	system GMM	
Group variable: CountryID	Number of obs=	4774	
Time variable : Time	Number of groups =	217	
Number of instruments = 115	Obs per group: min =	22	
Wald chi2(4) = 1.89e+07	avg =	22.00	
Prob > chi2 = 0.000	max =	22	

lnFDI	Coef.	Corrected Std. Err.	z	P>z	[95% Conf.	Interval]
lnGEE	-0.01423	0.014152	-1.01	0.315	-0.04197	0.013508
lnIFS	-0.0209	0.020676	-1.01	0.312	-0.06142	0.019627
lnCBB	0.002061	0.001958	1.05	0.292	-0.00178	0.005898
lnRQ	-0.00483	0.006286	-0.77	0.442	-0.01715	0.00749
_cons	7.202244	0.029607	243.27	0	7.144216	7.260272

GMM Estimation - Instrumentation and Specification Tests
Instrument Specification

Equation	Instruments
Orthogonal Deviations	GMM-type: L(1/21).(L.lnFDI lnGEE lnIFS lnCBB lnRQ) (collapsed)
Levels Equation (Standard)	lnFDI, lnGEE, lnIFS, lnCBB, lnRQ, _cons
Levels Equation (GMM-type)	D.(L.lnFDI lnGEE lnIFS lnCBB lnRQ) (collapsed)

Arellano-Bond Serial Correlation Tests

Test	z-Statistic	p-Value
AR(1) in First Differences	0.75	0.453
AR(2) in First Differences	1.01	0.313

Over identification Tests

Test	χ^2 Statistic	Degrees of Freedom (df)	p-Value
Sargan Test (Not robust)	5615.38	110	0.000
Hansen Test (Robust)	122.60	110	0.194

Difference-in-Hansen Tests of Exogeneity of Instrument Subsets

Instrument Subset	Hansen Test Excluding Group (χ^2, df, p-Value)	Difference Test (χ^2, df, p-Value)
GMM Instruments for Levels	$\chi^2(105) = 83.03$, p = 0.944	$\chi^2(5) = 39.57$, p = 0.000
gmm(L.lnFDI lnGEE lnIFS lnCBB lnRQ, collapse lag(1.))	$\chi^2(1) = 1.02$, p = 0.312	$\chi^2(109) = 121.58$, p = 0.193
iv(lnFDI lnGEE lnIFS lnCBB lnRQ, eq(level))	$\chi^2(105) = 90.39$, p = 0.844	$\chi^2(5) = 32.21$, p = 0.000

Discussion

This study provides empirical evidence on the significant roles of government effectiveness, financial literacy, and fintech in shaping foreign direct investment (FDI) inflows. The findings highlight that fintech acts as a crucial intermediary, facilitating investment by enhancing transparency, reducing transaction costs, and expanding financial accessibility. Furthermore, institutional quality plays a moderating role, with stronger regulatory frameworks amplifying the positive effects of fintech on FDI attraction. These insights underscore the importance of policy interventions aimed at strengthening financial governance, improving financial literacy, and fostering fintech ecosystems to create an investor-friendly economic environment. By addressing regulatory inefficiencies and leveraging digital financial services, countries can enhance their attractiveness to foreign investors. The study contributes to the growing body of literature on fintech and FDI, offering practical recommendations for policymakers, financial institutions, and international investors seeking to navigate the evolving financial landscape.

Future Directions

Future research should explore the sector-specific impact of fintech on FDI, particularly in industries where digital financial services play a transformative role. Additionally, longitudinal studies focusing on fintech adoption rates across different economies could provide deeper insights into the long-term effects of digital finance on investment patterns. Comparative analyses between developed and developing economies could also reveal nuanced differences in the regulatory and technological factors influencing FDI. Moreover, future studies should integrate micro-level data, such as firm-level investment decisions, to offer a more granular understanding of how fintech facilitates cross-border capital flows. Expanding research methodologies to include qualitative approaches, such as case studies and expert interviews, could further enrich the understanding of fintech's role in investment dynamics.

Limitations

However, this study has the following limitations as well. First, analysis was primarily based on the data downloaded from the World Development Indicators (WDI) which might give different measurement bias/ inconsistency across the economies. Secondly, the study does not capture the FDI flows' firm and investor-specific factors but only captures the nation-level variables. Third, whilst the concept of fintech is considered as a moderating factor, its specific sub-factors like block chain, digital banking or mobile banking are not considered separately; hence there might be a crystallization of information's. Lastly, the quality of institutions is used as a moderating variable; however, there is no distinction made between political economic systems that can affect governance efficiency. Therefore, other areas should be considered for research in the future, namely, firm-level data, sectoral analyses, and more specific variables of fintech that will help to understand the impact of FDI in the current digital environment.

Policy Recommendations

In the case of empirical recommendations for FDI through the use of fintech and better public governance and financial literacy, the following strategies should therefore be employed. First of all, the enhancement of financial literacy programs must be pursued. This calls for governments to include financial literacy in the school curriculum and work with financial institutions to offer online courses, seminars as well as community activities. To enhance the significance of fintech on the investment front, tailored efforts towards SMEs and other undertaking business can be pursued. Secondly, it is vital to strengthen the fintech fundamentals, as well as bring products and services closer to the end consumers. The governments concerned should encourage and facilitate the increase of the usage of financial solutions like mobile and Blockchain for enabling financial solutions. The legal setting for the growth and development of competencies of fintech companies should be completely transparent and favorable for innovation, the rights of consumers and investors should be protected at the same time. Also, to make use of as well as trade through digital platforms, financial institutions require sound cybersecurity systems. Third, increasing quality of institutions and regulations can have additional positive impact on investor confidence. To enable the establishment of stable relationships with players in fintech sub-sectors, clear and transparent policies to govern the operation of fintechs, standard compliance measures, and the anti-money laundering standards should be developed. Also, the concept of a fintech regulatory sandbox will enable the startups to pilot the new financial products and services within a specific proposed framework that clearly lays out the acceptable metrics and dynamics. As a final benefit, the adoption of technology to support cross-border investment payments can have a positive impact on the level of integration in the country. It is recommended that the formal authorities should ensure enhanced cross border executed fintech transactions by aligning in the regulations with the

set international financial benchmarks. The enhancement of bilateral and multilateral cooperation can also help in extending the same for digital financial services to attract foreign investors. In this way, the above-discussed measures will help countries harness the power of Fintech to promote the sustainable economic development and to attract more FDI.

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