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Full Length Article

Efficacy of judicial independence in explaining financial markets in emerging markets

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Abstract

The relationship between institutional quality, financial development, and economic growth has been well documented in the literature. However, much less work has been done the effect of judicial independence (JI) on financial market development (FM) in particular. This paper fills that gap using the JI score and FM in the context of 23 emerging markets (as identified by the Financial Times Stock Exchange Group) over the period 1980–2021. Overall, the results suggest that, in selected emerging markets JI fosters FM. Interestingly, the results across various quantiles of JI show that low JI hampers FM, but a medium and high level of JI boosts FM in these markets. These results are robust to several specifications. To the best of our knowledge, this is the first study to examine the direct impact of JI on FM and confirms the theories on new institutional economics as well as law and finance in emerging markets.

JEL classification: F21; G20; O16; O43; P14; P48

Keywords: Financial market development; Judicial independence; Law and finance; New institutional economics; Property rights

1. Background

Institutions and finance are two important pillars of overall economic development. The strand of literature on this paradigm can be divided into theoretical and empirical literature. Two theories —the new institutional economics (North, 1990) and law and finance theory (La Porta, Lopez-De-Silanes, Shleifer, & Vishny, 1997, 1998, 1999)—laid the foundation for examining the implications of quality institutions in economic and financial development, respectively. North (North, 1990, 1991) offers a comprehensive overview of the new institutional economics approach to understanding economic development, explaining that institutions promote economic growth by reducing transaction costs, promoting the enforcement of contracts, and protecting property rights. La Porta et al. (1997, 1998, 1999) argue that legal institutions can help make it more attractive for individuals and firms, including foreign investors, to invest in financial markets by reducing the costs of enforcing contracts and protecting property rights and helping to reduce the risk of expropriation and to promote greater transparency. These two theories offer a basis for investigating the impact of judicial independence (JI) on the development of financial markets (FM) in emerging economies.

Scholars have established in empirical studies that institutions and finance are important parameters in economic growth (Ahmed, Kousar, Pervaiz, & Shabbir, 2022; Haggard & Tiede, 2011; Henisz, 2000; Kutan, Samargandi, & Sohag, 2017). Others have confirmed that quality institutions promote financial activities (Abaidoo & Agyapong, 2022; Ahmed et al., 2022; Aman et al., 2023; Fergusson, 2006; Khan, Khan, & Zuojun, 2022; Khan, Haddad, Odeh, Haider, & Khan, 2022a, 2022b; Khan, Ilyas, & Hashmi, 2018; Khan, Kong, Xiang, & Zhang, 2019, p. 2020; Law & Azman-Saini, 2012).

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The empirical findings reveal that high- (low-)quality institutions foster (hamper) financial activities, in which they are considered moderators in the finance-growth nexus in some cases (Fergusson, 2006; Law, Kutan, & Naseem, 2018). It is crucial to understand which factors lead to the establishment of good institutions, which aid in the growth of the economy's financial sector (Fergusson, 2006). Hence, institutions and FM are the cornerstones of advancement in emerging markets.

The adoption of modern financial models in emerging markets is a positive sign of their commitment to economic growth and development. For instance, the traditional Mundell-Fleming model illustrates how monetary and fiscal policy operates under conditions of high capital mobility and has a potential application to emerging markets (Frankel, 2010). According to economists, capital mobility across national borders is critical because it enables capital to seek the highest rate of return. According to Kirabaeva and Razin (2013), unrestricted capital movement has the following benefits. First, international flows mitigate risk by diversifying lending and investment. Second, the global integration of capital markets can help spread the best corporate governance, accounting, and legal practices. Third, the global movement of capital limits governments' ability to pursue poor policies, perhaps because of the interconnection of global capital markets and resulting capital flows to emerging markets.

On the one hand, the growing capital flows to emerging markets accelerate capital market activities due to trading in stocks from newly registered multinational enterprises, technologically driven business startups (due to tax shields), and the advent of financial contracts (investment and lending). On the other hand, it raises challenges for regulators and institutions in dealing with the growing procedural requirements by the Securities and Exchange Commission on issuance and licensing, regulatory issues related to the registration of stocks by foreign firms, opening bank accounts for these firms, tax requirements, financial reporting, and adhering to local cultural and security norms. The legal structure in emerging markets should be comprehensive and conducive to the enforcement of required contracts and to effective and efficient protection of investors/lenders property rights. Excessive adherence to procedures encourages rent seeking and corruption, both of which reduce economic efficiency (Hayo & Voigt, 2008).

A strong economy is commonly believed to require a well-established rule of law that encompasses protection of individual rights, checks on government power, and measures to prevent corruption (Haggard & Tiede, 2011). Some assumptions about the security of private property are implausible in locations where the rule of law is weak. According to Johnson, McMillan, and Woodruff (2002), the absence of strong property rights makes it less likely that businesses will reinvest their profits (retained earnings), even when they have access to bank loans, and they are more likely to reinvest in regions where property rights are strong than in regions where they are weak. Zhao and Zhang (2022) find that reform in a local judicial system promotes FM, increases corporate financing, reduces expenditure on corporate bribery, and promotes long-term investment, leading to simultaneous advancement in the law and the economy.

For example, attracted by lucrative opportunities in emerging markets, foreign firms may expand their operations after fulfilling certain procedural prudential requirements. Later, if they confront rent-seeking in a business deal/contract (by a corporation/government officials), they may file a petition against it. Corruption-related uncertainty slows down economic activities by these firms, because, bribes, unlike taxes, can prevent the legitimate exercise of government authority (Cieślik & Goczek, 2018). If this occurs, foreign firms might consider winding down operations and moving them to either their home country or another country with judicial independence. Eventually, rent seeking increases the financial burden on these foreign firms in terms of liquidation/relocation costs due to the weakness of institutions and diversion of resources to wasteful pursuits (Cieślik & Goczek, 2018).

By contrast, Hayo and Voigt (2008) contend that, by making court decisions more predictable, some judicial procedures promote economic growth, which in turn encourages more transactions and higher investment. Similarly, Liu, Lu, Peng, and Wang (2022) show that JI can reduce local protectionism and foster cross-regional economic integration. They find that judicial reforms reduce local government control over local courts' financial and personnel decisions, thereby substantially expanding local courts' independence. As mentioned earlier, aggrieved foreign firms might shift operations, which could lead to capital flight and, in the end, reduction in trading volume on financial markets and cash flow in the economy. The host country's capital market can be affected by reporting on questionable JI (lack of legal structure and guaranteed property rights) in international media.

The impact of institutional quality on FM has been well documented in the literature (see, e.g., Abaidoo & Agyapong, 2022; Ahmed et al., 2022; Alawi, Abbassi, Saqib, & Sharif, 2022; Khan, Kong, Xiang, & Zhang, 2020). However, the effect of JI on FM in emerging markets has not been studied. We do so here, relying on classical theories on legal institutions and finance (La Porta et al., 1997, 1998, 1999), given the importance of law for finance in emerging markets (Abaidoo & Agyapong, 2022; Khan et al., 2020, 2022), and increasing role of emerging markets in the global economy. Therefore, we fill this gap using the JI score for the quality of government and FM from the International Monetary Fund in the context of 23 emerging markets over the period 1980–2021 (as identified by the Financial Times Stock Exchange [FTSE].

Theoretically, JI can influence FM in emerging markets through various mechanisms. First, JI can give investors legal protection by ensuring that their property rights are protected and that contracts are enforced. Eventually, it increases investor confidence in financial markets, leading to greater investment and more robust financial markets. Second, it can reinforce the rule of law, creating a more stable and predictable environment for economic activity, encouraging investment, and promoting FM. Third, it can help to reduce corruption by ensuring that legal decisions are made impartially and without influence from political or economic interests. This can create a more transparent and fair business environment, which can attract foreign investment and drive FM. Fourth, JI can ensure the

enforcement of regulations and laws governing financial markets, creating a level playing field for all market participants, which increases investor confidence and encourages greater participation in financial markets. The diverse and interrelated mechanisms through which JI drives FM in emerging markets are briefly highlighted to highlight the importance of a strong and independent judiciary in fostering FM.

Our primary contribution to the literature is that, to our best of knowledge, this is the first paper to examine the direct impact of JI on FM and confirm the applicability of the new institutional economics and law and finance theories to emerging markets. Overall empirical findings show that JI enhances FM in emerging markets. Our analysis across various quantiles shows that low JI hinders FM, and its positive and significant effect holds in the upper quantiles.

As shown by the empirical results, the presence of an independent and well-functioning judiciary plays a crucial role in promoting the growth of financial markets. For policy makers and regulators, this research highlights the importance of creating a stable and predictable legal framework to support FM. They can do this by implementing reforms that increase the independence and accountability of the judiciary, such as protection of the judicial budget and the appointment of impartial judges. In addition, they can support development of the financial sector through initiatives such as providing technical assistance and training for financial institutions and market participants. This research also shows the importance for firms and managers of operating within a well-functioning legal framework that protects the rights and interests. Other stakeholders, such as investors, consumers, and creditors, benefit by obtaining access to a wider range of investment opportunities, increased transparency and accountability, and less risk of corruption and fraud.

The remainder of this paper is structured as follows: The methodology is described in Section 2. The empirical findings are presented in Section 3. Section 4 is a discussion, and the conclusion is given in Section 5.

2. Methodology

2.1. Econometrics strategy

This study examines the impact of JI on FM in 23 emerging economies over the period 1980–2021 using a fixed-effects model as the baseline estimator. The reason for using a fixed-effects model is to control for any unobservable or time-invariant confounding factors that might affect the relationship between the independent and dependent variables. Following the literature (Aman et al., 2023; Khan, Khan, & Zuojun, 2022a; Khan, Haddad, Odeh, Haider, & Khan, 2022b), we construct the following baseline model:

$$FM_{it} = \beta_0 + \beta_1 JI_{it} + \beta_n controls + \varepsilon_{it} \quad (1)$$

where *FM* (financial market development) is the dependent variable, which is explained by *JI* (judicial independence). β_0 is a constant that represents the expected value of the dependent variable when the independent variable is zero. β_1 is the coefficient for the independent variable, *JI*. It represents the change in the dependent variable for every unit change in the independent variable. β_n represents the coefficients for the control variables: economic freedom (*EF*), growth rate (*EG*), institutional quality (*IQ*), foreign direct investment inflows (*FDI*), the real effective exchange rate (*XR*), political regime (*PR*), and a financial crisis dummy (*d_2008*) (Aman et al., 2023; Khan et al., 2022a; Khan et al., 2022b). ε_{it} is an error term, which captures the effects of all unmeasured variables that might affect the relationship between the independent and dependent variables. *i* is the country, and *t* is the time period.

Although the fixed-effects model is a useful estimator, it does not address the diagnostic problems (heteroskedasticity, serial correlation, and cross-sectional dependence), which require a specification that can deal with these issues. Therefore, in the next step, we estimate the standard error correction models, such as feasible generalized least squares (FGLS) regression and Driscoll-Kraay models. FGLS is a regression analysis method that enables the estimation of regression coefficients even when the error terms are heteroskedastic or autocorrelated. It corrects for heteroskedasticity by transforming the dependent variable or the independent variables so that the error terms are homoskedastic. Likewise, the Driscoll-Kraay model is a panel data regression method that is used with cross-sectional dependence, where the error terms are correlated within groups but not between groups. The FGLS and Driscoll settings have unique characteristics, but they cannot address endogeneity problems (stemming from correlation of independent variables and error terms and reverse causality). To deal with this issue, we rely on a two-stage least squares (2SLS) regression, as follows:

$$FM_{it} = \beta_0 + \beta_1 \widehat{JI}_{it} + \beta_n controls + \varepsilon_{it} \quad (2)$$

where $\widehat{JI}$ is the predicted value of *JI* from the first-stage regression. The other parameters are same as those in Equation (1).

2.2. Variables and data source

We examine the efficacy of JI on FM in 23 emerging markets over the period 1980–2021, as identified by the FTSE Group (FTSE, 2022) (for a list of the countries, see the Appendix). The secondary available dataset comes from various sources.

JI represent the ability of a judiciary to make decisions free of external influence, measured on a scale of 0–10, in which 0 means the absence of JI, of a reliable legal framework, and of protection for intellectual property, and 10 means a high level of JI, the presence of a trusted legal framework, and protection of intellectual property. The data come from the Quality of Government Institute database (Teorell et al., 2022). *FM* represents the growth and expansion of the various financial markets within an economy, measured from 0 to 1, as an aggregated score of financial market depth (*FMD*), access (*FMA*), and efficiency (*FME*). *FMD* measures the size of a country's financial markets and the range of financial instruments available. A deep financial market has a

wide range of financial instruments and a large number of market participants. The size of the market is typically measured as a percentage of the gross domestic product (GDP). A country with a deep financial market is likely to have a larger number of financial institutions and a more diverse range of financial products. *FMA* measures the speed and cost of transactions in financial markets. A more efficient financial market has quicker and cheaper transactions, which encourages greater market participation. The efficiency of financial markets can be measured by indicators such as bid-ask spreads, trading volume, and market liquidity. *FMA* measures the ease with which individuals and businesses can access financial markets. The factors that affect access include regulations, infrastructure, and the availability of information. A country with wide access to financial markets has a well-functioning regulatory framework, developed financial infrastructure, and good access to financial information. The annual data come from the International Monetary Fund.

Among the control variables, *EF* is the ability of individuals to make their own economic decisions, without interference from the government or other external forces. The economic EF index is based on objective factors that represent the existence or lack of EF, measured on a scale from 0 to 10, where 0 is less EF and 10 is more EF. *EG* is the growth rate calculated as changes in real GDP per capita (adjusted for inflation) over a given period. This growth rate is a measure of how much a country's economy has expanded or contracted in terms of its output per person over time. *IQ* is an average of corruption, law and order, and bureaucracy. Quality variables from the ICRG are normalized to a scale of 0–1. A higher value indicates high-quality institutions, and low indicates low-quality institutions. *FDI* is investment by a company or an individual in a country for business interests located in another country. It involves the transfer of capital, resources, technology, and expertise from the investing company or individual to the foreign company where the investment is made. *PR* encompasses how a government operates, including its structure, processes, and decision-making procedures. It is measured by polity2, which is a widely used dataset that measures the characteristics of a political regime based on a scale from −10 (most autocratic) to +10 (most democratic). The data on independent and control variables come from the Quality of Government Institute database (Teorell et al., 2022).

3. Empirical results

Table 1 shows the descriptive statistics of the variables, including the mean, standard deviation, minimum, and maximum values. The means suggest that, on average, *FM* is low, *JI* and *XR* are moderate, *EF* is moderate to high, *EG* is relatively high, *IQ* is moderate, and *FDI* is low. The standard deviations indicate that the data is widely dispersed, with a broader spread in *XR, FDI, PR,* and *JI.* The minimums and maximums show the range for each variable, which can be used to make inferences about the relationships among the variables (Table 2).

Table 2 shows the results of a baseline fixed-effects regression in which *JI* has a positive and significant impact on *FM*, with a coefficient of 0.0619. This means that an increase in *JI* is associated with an increase in *FM*. Similarly, *EF*, *FDI*, and the financial crisis dummy have a positive and significant impact on *FM*.

Table 1

Variable	Mean	Std. Dev.	Min	Max
FM	.331	.18	0	.736
JI	5.067	1.229	2.017	9.12
EF	6.272	1.03	2.908	8.13
EG	.024	.101	−.771	1.106
IQ	.563	.16	.111	1
FDI	2.355	5.161	−40.33	56.369
XR	398.747	1746.591	−1483.712	14236.939
PR	5.825	3.284	−1.924	10.00

Table 2
Baseline fixed effect results.

Variable	(1) FM
JI	.0619***
	(.009)
EF	.0683***
	(.0059)
EG	−.1528***
	(.0397)
IQ	−.1911***
	(.043)
FDI	.0014*
	(.0008)
XR	0**
	(0)
PR	.0008
	(.0018)
d_2008	.0646***
	(.0121)
Constant	−.3114***
	(.0464)
Observations	966
R-Square	.3977
F-Stat	77.1597
Modified Wald test for groupwise heteroskedasticity	1798.80
Pesaran's test of cross-sectional independence	13.462
Wooldridge test for autocorrelation in panel data	66.341

Standard errors are in parentheses.
***$p < .01$, **$p < .05$, *$p < .1$.

However, *IQ* has negative and significant impact on *FM,* indicating that higher-quality government is associated with lower *FM. EG, FDI, XR,* and *d_2008* also have a significant impact on *FM,* as indicated by their *p*-values. The constant has a negative and significant coefficient of −0.3114 ($p < .01$). R^2 is 0.3977, which indicates that the independent variables explain 39.77 percent of the variation in the dependent variable (*FM*). The *F*-statistic (77.1597) is significant, which suggests that the model as a whole is valid.

The results of the modified Wald test of GroupWise heteroskedasticity, the Pesaran test of cross-sectional independence, and the Wooldridge test of autocorrelation are significant, which indicates that the baseline estimation has some diagnostic issues. To address these issues, we use robust FGLS and Driscoll-Kraay models, and the results are reported in Table 3, showing that most of the variables (*JI, EF, EG, IQ, FDI, XR, PR,* and *d_2008*) are statistically significant. The coefficients of

Table 3
Alternative estimator result.

	(1)	(2)
	FGLS	Driscoll Kraay
Variable	*FM*	*FM*
JI	.0111**	.0619***
	(.0048)	(.0091)
EF	.062***	.0683***
	(.0047)	(.0077)
EG	−.0784	−.1528*
	(.0508)	(.0848)
IQ	−.2545***	−.1911***
	(.0341)	(.056)
FDI	.0015**	.0014
	(.0006)	(.0011)
XR	0***	0***
	(0)	(0)
PR	−.003**	.0008
	(.0015)	(.0017)
d_2008	.0724***	.0646***
	(.0125)	(.019)
Constant	.0316	−.3114***
	(.0262)	(.0718)
Observations	966	966
Pseudo R^2	–	0.3977
F-stat/Chi^2	433.59	53.0316

Standard errors are in parentheses.
****p < .01, **p < .05, *p < .1.*

the variables in the two estimators differ slightly, but the overall results for *JI* are consistent with the baseline model, indicating that the model has overall fitness.

Table 4 lists the results for the dimensions of *FM* in the 2SLS model (*FMD, FME,* and *FMA*), showing that they are positively and significantly explained by *JI,* hence, *JI* is an important determinant of *FM* and its dimensions. The tests of under-identification (Anderson canon. corr. LM statistic) and weak identification (Cragg-Donald Wald *F*-statistic) are used to assess the validity of the model and the instruments used to measure the independent variables, and a high value indicates weak identification, whereas a low value indicates strong identification. Finally, the Sargan statistic (overidentification test of all instruments) is used to assess the validity of the instruments. A *p*-value less than 0.05 indicates that the instruments are valid, and, in this case, the $p = .000$, which strongly supports the validity of the instruments. These diagnostic statistics suggest that the instruments used in the 2SLS estimation are appropriate and valid.

Additionally, to determine whether results are sensitive to the sample, we perform a sample sensitivity analysis by omitting the highest and lowest 10 percent of observations of *JI*, and the results are in Table 5. Of particular interest is the coefficient for *JI,* which is positive and statistically significant in explaining *FM* and its three dimensions at varying magnitudes. The coefficients estimated for this variable in the four models are from 0.0768 to 0.106, all of which are statistically significant ($p < .01$). This indicates that, as *JI* increases, the dependent variable is expected to increase as well. R^2 is from 0.1903 to 0.4106, indicating that the independent variables account for 19.03 percent to 41.06 percent of the variation in the dependent variable. The *F*-statistic, which is a joint test of the statistical significance of all independent variables in the model, is from 22.5621 to 63.4489.

Additionally, the Anderson LM statistic is 526.942, and the Cragg-Donald Wald *F*-statistic is 1854.009, which suggests that the model is correctly identified. Finally, the *p*-value for

Table 4
Sub-dimensions of FM (IV-2SLS results).

	(1)	(2)	(3)	(4)
Variable	*FM*	*FMD*	*FME*	*FMA*
JI	.0751***	.0845***	.0665***	.069***
	(.0107)	(.0116)	(.0198)	(.01)
EF	.0626***	.0759***	.0595***	.0472***
	(.0063)	(.0068)	(.0116)	(.0059)
EG	−.1255***	−.087**	−.2338***	−.0587
	(.0408)	(.0442)	(.0751)	(.038)
IQ	−.2157***	−.1971***	−.2983***	−.1475***
	(.0439)	(.0475)	(.0809)	(.0409)
FDI	.0014*	.0007	.0024*	.0012
	(.0008)	(.0009)	(.0015)	(.0007)
XR	0***	0***	0*	0*
	(0)	(0)	(0)	(0)
PR	.0005	.0062***	−.0083**	.0023
	(.0018)	(.0019)	(.0033)	(.0017)
d_2008	.0628***	.046***	.1209***	.0229**
	(.012)	(.013)	(.0222)	(.0112)
Observations	943	943	943	943
R-squared	.3812	.3947	.1899	.2893
F-stat	71.8043	74.5499	27.6099	47.8321
Underidentification test (Anderson canon. corr. LM statistic)	689.266			
Weak identification test (Cragg-Donald Wald F statistic):	2724.401			
Sargan statistic (overidentification test of all instruments) p-value	0.000			

Note: The numbers against EG, and XR are 0 in few cases which is due to rounding up to 4 decimal places. Standard errors are in parentheses.
****p < .01, **p < .05, *p < .1.*

Table 5
Robustness check through sample sensitivity analysis.

	(1)	(2)	(3)	(4)
Variable	*FM*	*FMD*	*FME*	*FMA*
JI	.0962***	.106***	.0999***	.0768***
	(.0125)	(.0136)	(.0217)	(.0121)
EF	.0581***	.0773***	.0412***	.0497***
	(.0076)	(.0082)	(.0131)	(.0073)
EG	−.1147***	−.076	−.2174***	−.0545
	(.0432)	(.0469)	(.0748)	(.0416)
IQ	−.1585***	−.1084*	−.2825***	−.0895*
	(.0527)	(.0572)	(.0912)	(.0507)
FDI	.0013	−.0002	.0031*	.0011
	(.001)	(.0011)	(.0017)	(.0009)
XR	0	0	0	0***
	(0)	(0)	(0)	(0)
PR	.0014	.0096***	−.0059	−.0012
	(.0024)	(.0026)	(.0041)	(.0023)
d_2008	.0686***	.0493***	.1211***	.0369***
	(.0139)	(.0151)	(.0241)	(.0134)
Observations	755	755	755	755
R-squared	.3847	.4106	.1903	.31
F-stat	58.3125	63.4489	22.5621	41.7159
Underidentification test (Anderson canon. corr. LM statistic)	526.942			
Weak identification test (Cragg-Donald Wald F statistic):	1854.009			
Sargan statistic (overidentification test of all instruments) p-value	0.000			

Note: The numbers against EG, and XR are 0 in few cases which is due to rounding up to 4 decimal places. Standard errors are in parentheses.
****p < .01, **p < .05, *p < .1.*

the Sargan statistic (overidentification test of all instruments) is significant, which indicates that the instruments are valid.

Table 6 reports the results of *JI* and *FM* across various quantiles. In column (1), the coefficient of *JI* is −0.1049, which is significant at the 5 percent level ($p < .05$). The coefficient shows that for a 1-unit increase in *JI, FM* is expected to decrease by 0.1049 units on average, holding other variables constant. This suggests that, as *JI* decreases, *FM* decreases as well. In other

Table 6
Robustness check: results across various quantiles.

	(1)	(2)	(3)	(4)
Variables	*FM*	*FM*	*FM*	*FM*
JI	−.1049**	.4681***	.1727***	.1414***
	(.0411)	(.1315)	(.0512)	(.0371)
EF	.1091***	.0699***	.0473***	.0687***
	(.019)	(.0233)	(.0126)	(.0096)
EG	−.0414	−.1494***	−.0326	−.0694
	(.0455)	(.0541)	(.1221)	(.1184)
IQ	.0066	−.1302	−.5235***	−.6456***
	(.0817)	(.1225)	(.1096)	(.0835)
FDI	.0181***	.019***	−.0028	.0001
	(.0049)	(.005)	(.0051)	(.0005)
XR	0***	0	.0002	0
	(0)	(0)	(.001)	(.0001)
PR	.0041	−.012***	.0014	−.0056**
	(.0026)	(.0045)	(.004)	(.0025)
d_2008	−.0227	.0483**	.0595***	.0626***
	(.0231)	(.0237)	(.0204)	(.014)
Observations	234	230	240	237
R-squared	.2831	.4729	.2735	.6574
F-stat	9.7095	25.441	11.0044	54.1323
Underidentification test (Anderson canon. corr. LM statistic)	83.674			
Weak identification test (Cragg-Donald Wald F statistic):	128.797			
Sargan statistic (overidentification test of all instruments) p-value	0.000			

Note: The numbers against EG, and XR are 0 in few cases which is due to rounding up to 4 decimal places. Standard errors are in parentheses.
****p < .01, **p < .05, *p < .1.*

words, lower levels of *JI* are associated with lower levels of *FM*. Columns (2) and (3) show the results for the second and third quantiles, in which the coefficient of *JI* is 0.4681 (significant at the 1% level) and 0.1727 (significant at the 1% level), respectively. These results suggest that, as *JI* increases, *FM* also increases, but the magnitude of this relationship varies across quantiles. Column (4) shows the results for the fourth quantile, in which the coefficient of *JI* is 0.1414, which is significant at the 1 percent level ($p < .01$). This result indicates that, as *JI* increases, *FM* is also expected to increase by 0.1414 units on average.

R^2 in Table 6 gives the proportion of variation in *FM*, the dependent variable, that can be explained by *JI,* the independent variable; R^2 is from 0.2733 to 0.6757, which indicates that 27.33 percent to 67.57 percent of the variation in *FM* can be explained by *JI.* The highest R^2 (0.6757) is in column (4), and the lowest (0.2733) is in column (3). This suggests that the relationship between *JI* and *FM* varies across quantiles, and further analysis is needed to understand the nature of this relationship. The diagnostic statistics satisfy the requirements for the model and instruments.

4. Discussion

JI plays a crucial role in *FM* in emerging economies. Financial markets require a stable and predictable legal environment in order to function effectively. An independent judiciary is essential for ensuring that the rule of law is upheld and that the rights of market participants are protected. According to Rodrik (2005), prior research on national institutions has primarily concentrated on the safeguarding of property rights and the maintenance of the rule of law. However, institutions should be considered in a wider context (North, 1990; Rodrik, 2005). High-quality institutions encourage positive behavior by economic actors, and these institutions can be either formal (e.g., legal rules enforced by third parties) or informal (e.g., moral codes and self-enforcing agreements) (Rodrik, 2005). As market exchange expands and deepens, the significance of formal institutions increases because of their high fixed costs and low marginal costs, as shown by Li (1999) and Blundell, Dixit, and Sherrerd (2004). Overall, greater *JI* appears to increase entrepreneurial activity (Dove, 2015), and, following prior literature, we find that *JI* has a positive impact on *FM* in emerging economies.

A strong and independent judiciary helps protect property rights, which is crucial for *FM* (which is important for institutions, as mentioned by Rodrik [2005]). When investors feel confident that their property rights are protected, they are more likely to invest in the financial market, thereby boosting market activity and development. According to Johnson et al. (2002), the absence of strong property rights makes it less likely that businesses will reinvest their profits (retained earnings), even when they have access to bank loans, and they are more likely to reinvest their profits in regions with strong property rights than in regions where they are weak. Thus *JI* is essential for ensuring effective enforcement of contracts. This is particularly important in emerging economies, where the legal framework is often weak, and contracts are not always respected. An independent judiciary helps enforce contracts, which provides a stable and predictable legal environment, which is crucial for *FM*.

As reported in the literature (Cieślik & Goczek, 2018; Haggard & Tiede, 2011; Hayo & Voigt, 2008), corruption is a major obstacle to *FM* in emerging economies. An independent judiciary helps reduce corruption by ensuring that the rule of law is upheld and that corrupt practices are penalized. This provides a level playing field for market participants and helps attract foreign investment, which is crucial for *FM*. La Porta et al. (1997) document that legal institutions promote transparency in financial markets. Therefore, independent judges can make impartial decisions, free of political influence, which helps to reduce the risk of insider trading and other forms of market manipulation. This helps promote market integrity and stability, which are crucial for market development.

Competition in financial markets is encouraged when anticompetitive practices are penalized. This helps to create a level playing field for market participants and encourages the entry of new market participants, which helps to increase market efficiency and stability. According to Rodrik (2005), macroeconomic and financial stability depend on effective regulatory measures to ensure sound financial practices. In countries where the judiciary is independent and impartial, foreign investors feel more secure and confident about investment because, consistent with the law and finance theory (La Porta et al., 1997, 1998), they can rely on the courts to protect their rights in the event of any legal disputes. When investors feel secure, they are more likely to invest, which leads to increased capital inflows and contributes to the development of financial markets. Independent judiciaries are better equipped to handle complex financial cases and resolve disputes in a timely and effective manner. This enhances efficiency in the financial market and reduces the cost of doing business. It also helps to reduce uncertainty and risk in the market (Cieślik & Goczek, 2018), which attracts more investment (Hayo & Voigt, 2008; Liu et al., 2022).

By contrast, weak institutions reduce economic efficiency (Hayo & Voigt, 2008; Johnson et al., 2002). In emerging economies, low *JI* has many causes, including political interference, corruption, inadequate funding and resources, a shortage of trained and experienced judges, and a weak legal framework. These factors can lead to uncertainty and reduce investor confidence, with a negative impact on financial markets. Our inferences are confirmed by Zhao and Zhang (2022), who document that improvement in a local judicial system has a positive impact on the financial sector and corporate financing, because the amount spent on bribes declines and investment in the long term and in research and development increases, which leads to simultaneous advancement in the legal system and the economy.

5. Conclusion

This study empirically tests the new institutional economics as well as law and finance theories in context of 23 emerging economies over the period 1980–2021 by investigating the role of JI in promoting FM. The empirical results suggest that JI accelerates financial activities in emerging economies. A low

level of JI impedes FM in these markets, whereas moderate and high levels of JI foster it, therefore, policy makers should devote some attention to designing policies that expand JI in order to reap the financial benefits from doing so. We find that the level of JI has a significant impact on FM in emerging markets. A low level of JI negatively affects FM, whereas a moderate to high level of JI has a positive impact on it. These findings are robust to different quantiles of JI and different specifications that account for heteroskedasticity, serial correlation, cross-sectional dependence, and endogeneity. This implies that institutions, such as JI, can help to create a stable and predictable environment that attracts investment, promoting economic growth and development.

This study briefly highlights the diverse and interrelated mechanisms through which JI can affect FM in emerging markets, emphasizing the crucial role of a strong and independent judiciary in fostering FM. However, the study does not test these mechanisms, so future research is recommended to explore these dynamics further.

Annexure-A

List of Emerging countries (analysed)

S. No.	country
1	Brazil
2	Chile
3	China
4	Colombia
5	Czech Republic
6	Egypt, Arab Rep.
7	Greece
8	Hungary
9	Iceland
10	India
11	Indonesia
12	Kuwait
13	Malaysia
14	Mexico
15	Pakistan
16	Philippines
17	Qatar
18	Romania
19	Saudi Arabia
20	South Africa
21	Thailand
22	Turkiye
23	United Arab Emirates
24	**Taiwan***

* Note: Taiwan is not covered by IMF FM index and excluded from analysis. Efficacy of judicial independence in explaining financial markets in emerging markets.

Declaration of competing interest

The authors declare no conflict of interest.

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