Finance Research Letters 86 (2025) 108889

Contents lists available at ScienceDirect

Finance Research Letters

journal homepage: www.elsevier.com/locate/frl

Political stability, geopolitical risks, and bank stability

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ARTICLE INFO

Keywords:
Bank stability
Political stability
Geopolitical risks
Panel quantile regression

ABSTRACT

Banking fragility in developing countries often stems from political instability and geopolitical risks. Referring collectively to both risks as foundational risks, this paper examines the impact of these risks on bank stability in developing countries. We employ panel quantile regressions and uncover that foundational risks exert asymmetric effects across the distribution of bank soundness. An increase in political stability and a reduction in geopolitical risks significantly strengthen banks' resilience, particularly among the most vulnerable banks. Moreover, a rise in foundational risks intensifies fragility without triggering systemic collapse. These findings offer a fresh perspective for regulators seeking targeted resilience strategies in uncertain political and geopolitical landscapes.

1. Introduction

Uncertainty is a key driver of banking sector fragility, understood here as the opposite of bank stability, and it operates through multiple channels such as investor sentiment, funding costs, credit allocation, and the overall resilience of financial systems. These channels create vulnerabilities that are particularly pronounced in developing countries, where institutional frameworks are weaker, financial safety nets are limited, and macro-financial volatility is more frequent (Phan et al., 2021; Shabir et al., 2021).

Much of the existing literature on the uncertainty–bank stability nexus focuses on economic policy uncertainty (EPU) as a dominant source of risk. Recent studies continue to emphasize this policy dimension (Liu et al., 2025; Nguyen, 2021; Ozturk Danisman and Tarazi, 2024). However, EPU reflects ambiguity within functioning policymaking environments, such as debates over fiscal or monetary policy, where the primary source of volatility is internal to the economic system. Given this understanding, this perspective does not fully characterize the uncertainty landscape in many developing countries, where structural instability, political fragility, and geopolitical tensions may override conventional policy debates.

In countries with weak institutional foundations, uncertainty stemming from foundational risks[1] is often more consequential than policy ambiguity. From an institutional economics perspective, such risks erode the government's ability to maintain credibility, enforce rules, and uphold stability (Acemoglu and Robinson, 2012; North, 1990). Yet foundational risks become financially consequential only when they interact with a fragile financial system. Building on Minsky's (1977) Financial Instability Hypothesis and

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[1] We use the term foundational risks to denote structural, non-economic forms of uncertainty that originate from political and geopolitical domains, particularly variations in political stability and exposure to geopolitical tensions. These risks undermine the institutional credibility that supports financial systems, making them distinct from short-term policy uncertainty.

https://doi.org/10.1016/j.frl.2025.108889
Received 1 September 2025; Received in revised form 15 October 2025; Accepted 6 November 2025
Available online 6 November 2025

related crisis transmission models (Allen and Gale, 2000; Laeven and Valencia, 2018), institutional or geopolitical disruptions can magnify systemic vulnerabilities by accelerating capital outflows, increasing risk premia, reducing credit access, and undermining confidence in the banking sector. These mechanisms are likely to be potent in developing countries where institutional buffers are thin and investor expectations are highly sensitive to non-economic signals. In this theoretical context, political stability and geopolitical risk act as opposite forces within the same fragility framework. Consistent with North (1990) and Acemoglu and Robinson (2012), political stability enhances institutional credibility by lowering coordination uncertainty and reinforcing enforcement mechanisms. This institutional strength translates into tangible financial effects, as stable political environments reduce risk premia, support investor confidence, and ease credit conditions—thereby dampening Minskyan instability dynamics. Conversely, heightened geopolitical risk increases perceived external threats and policy uncertainty, which raise funding costs, trigger precautionary liquidity hoarding, and amplify the endogenous fragility emphasized by Minsky (1977). Through these institutional and financial channels, foundational risks directly shape the probability and intensity of banking instability in developing economies.

While a growing literature has begun to explore foundational risks, such as political stability (Al-Shboul et al., 2020; Diab et al., 2023; Shabir et al., 2024) as well as geopolitical risk (Olalare and Mukuddem-Petersen, 2024; Phan et al., 2022), these studies often assume homogeneity in their effects across countries and banking systems. This assumption is problematic in the context of developing economies, where institutional and financial heterogeneity is substantial, and the capacity to absorb shocks varies widely among banks.

Motivated by this gap, this study asks whether foundational risks exert asymmetric effects across the distribution of bank stability in developing countries. By shifting the focus from average effects to distributional vulnerabilities, we expect to make a novel contribution to the existing literature regarding the impacts of foundational shocks in developing countries. To empirically test this hypothesis, we apply a panel quantile regression approach, which allows us to capture heterogeneous effects across the conditional distribution of bank stability.

2. Empirical framework

2.1. Data and variables

This study utilizes an unbalanced panel dataset covering 18 emerging economies from 2000 to 2021. The time coverage is determined by data availability, as observations for all bank-specific indicators, including the bank stability proxy, which stands at the core of our framework, are not available beyond 2021. Similarly, the country sample is shaped by the availability of harmonized and complete banking data across the 2002–2021 period. Due to significant limitations in data coverage in the banking data among developing countries, our final sample consists of 18 countries for which bank-specific variables are consistently available. The countries include the following: Argentina, Brazil, China, Colombia, Egypt, India, Indonesia, Malaysia, Mexico, Peru, the Philippines, South Africa, Thailand, Tunisia, Türkiye, Ukraine, Venezuela, and Vietnam. The selection of these countries is driven by both data consistency and analytical relevance. The dataset incorporates governance indicators, banking system metrics, and macroeconomic variables sourced from the World Bank databases. Additionally, geopolitical risk data are obtained from Caldara and Iacoviello (2022).

The dependent variable is the bank z-score, a widely used inverse indicator of bank fragility in the literature. Higher z-scores imply greater stability (lower probability of default), while lower z-scores correspond to higher fragility. To represent foundational risks, we use two key indicators: political stability and absence of violence or terrorism (*pv*) and geopolitical risk (*gr*). The former reflects perceptions regarding the likelihood of political instability or politically-motivated violence, including terrorism, while the latter quantifies geopolitical risk based on the frequency of media coverage concerning adverse geopolitical events, aggregated monthly.

Considering the previous literature (Phan et al., 2021, 2022; among others), we also incorporate two sets of control variables: macroeconomic controls include gross domestic product per capita (*gdppc*) and inflation (*inf*), while banking sector-specific controls comprise the capital-to-assets ratio (*cap*), net interest margin (*nim*), and the ratio of non-performing loans to gross loans (*npl*).

2.2. Estimation strategy

To examine the asymmetric effects of political stability and geopolitical risks on banking sector stability, we employ panel quantile regression. The quantile regression framework is specified as follows:

$$Q_y(\tau|X_{it}) = X'_{it}\beta_\tau + a_i^\tau \tag{1}$$

where $Q_y(\tau|X_{it})$ denotes the conditional quantile of the dependent variable for individual i at time t, β_τ is the vector of quantile-specific coefficients, and a_i^τ captures individual fixed effects at quantile τ.

Quantile regression, initially introduced by Koenker and Bassett (1978), allows for a more comprehensive analysis by estimating the effects of covariates across the entire conditional distribution of the dependent variable, rather than focusing solely on the mean. Unlike ordinary least squares, which is sensitive to outliers and assumes normality, quantile regression is robust to non-normal distributions and extreme values.

The use of quantile regression is particularly well-suited to our research question for both theoretical and empirical reasons. Theoretically, we hypothesize that foundational risks disproportionately affect the counties with the most fragile banks, those with lower capitalization and weaker governance, while countries with more stable institutions may be more resilient. This suggests heterogeneity in impact across the distribution of bank stability. Quantile regression directly captures this heterogeneity by allowing the

Table 1
Descriptive statistics.

Variables	Skewness	Kurtosis	SW	JB
zscore	0. 6697	3.4265	0.9495***	31.61***
pv	−0.2278	2.3338	0.9813***	10.75***
gr	−0.3540	4.1109	0.9791***	28.63***
gdppc	−0.3268	2.3808	0.9737***	61.5***
inf	3.9127	23.0726	0.6242*	6.904***
cap	0.2059	2.7493	0.9922***	3.206
nim	1.7269	7.5033	0.8580***	505.9***
npl	1.8974	6.3014	0.7375***	363.7***

Notes: *** and * denote significance at the 1 % and 10 % levels, respectively.

effect of explanatory variables to vary at different points of the conditional distribution of the dependent variable. From an empirical standpoint, we verify that the data do not follow a normal distribution, as quantile regression is more appropriate for non-normal and heavy-tailed distributions. Several tests presented in Table 1 confirm this: skewness, kurtosis, the Shapiro-Wilk test, and the Jarque-Bera test all reject the null hypothesis of normality at the 1 % significance level for all variables. These results justify the use of quantile regression.

We adopt the simultaneous bootstrapped quantile regression (SQREG) method, which estimates multiple quantiles concurrently, providing robust standard errors through bootstrapping. This method minimizes the sum of absolute residuals and remains invariant to monotonic transformations (Lee and Chen, 2020). We report results for five quantiles in tabular form and nine quantiles in graphical analyses.[2] Lower quantiles correspond to periods of low banking sector stability, while higher quantiles reflect greater stability.

As a robustness check, we use the Generalized Quantile Regression (GPQR) method (Powell et al., 2014), which addresses endogeneity by estimating unconditional quantile treatment effects with covariates and instruments. The GPQR is implemented via a Markov Chain Monte Carlo (MCMC) procedure with 10,000 draws and a burn-in of 3000. The stochastic nature of MCMC improves the chance of reaching the global rather than local optima (Lu et al., 2019).

3. Empirical findings

Table 2 presents the estimation results from the SQREG model, which investigates the effects of political stability, geopolitical risk, and control variables on banking system stability across different quantiles of the conditional distribution of the z-score.

The results show that political stability significantly improves bank resilience only at the lower quantiles, highlighting its critical role in fragile systems. This pattern supports theories of financial fragility (Minsky, 1977) and institutional vulnerability (Acemoglu and Robinson, 2012), while effects diminish at higher quantiles where stronger banks can better absorb shocks.

As another proxy for foundational risk, geopolitical risk significantly reduces bank stability at the lower quantiles, indicating that fragile financial systems are especially vulnerable to heightened geopolitical tensions. These asymmetric results have clear economic underpinnings. Political stability supports a predictable policy environment, which reduces uncertainty in credit allocation and fosters depositor confidence. For banks operating with thin capital buffers, such improvements in institutional predictability lower perceived default risk and stabilize funding conditions. Conversely, geopolitical risk transmits through global risk appetite, exchange-rate pressures, and capital-flow volatility, all of which intensify fragility in already vulnerable banking systems. The fact that geopolitical risk exerts its strongest adverse effects in lower quantiles reflects how international tensions primarily tighten liquidity and increase borrowing costs for weaker institutions.

To better contextualize the quantile-specific effects, it is useful to consider the characteristics of banking systems represented in different segments of the conditional distribution. The lower quantiles typically correspond to banks with weaker capitalization, higher credit risk, and limited capacity to absorb shocks, reflecting more fragile financial structures. In contrast, the upper quantiles represent better-capitalized and more diversified banking systems that are generally more resilient to uncertainty. This distributional pattern helps explain why political stability exerts a stronger stabilizing effect and geopolitical risk has a more disruptive influence at the lower quantiles: banks operating under fragile balance-sheet conditions are more sensitive to institutional and external shocks, whereas stronger systems can better absorb such risks.

Regarding the macroeconomic variables, GDP per capita and inflation consistently display a significant impact on banking stability across nearly all quantiles. On the other hand, the impact of bank-specific variables is volatile across different quantiles. Note that figures plotting the impacts obtained from SQREG are available in the appendix. Note also that GPQR results presented in Table 3 confirm the SQREG findings, reinforcing their robustness to endogeneity concerns.

Our results are broadly consistent with recent evidence linking institutional and external uncertainty to financial fragility. Studies such as Phan et al. (2022) and Olalare and Mukuddem-Petersen (2024) document that geopolitical tensions adversely affect banking

[2] The selection of quantiles is driven by both statistical relevance and interpretability. The five tabulated quantiles provide a representative overview across the distribution and are commonly used in empirical applications to reflect low, lower-middle, median, upper-middle, and high stability conditions. For visual diagnostics, we present nine quantiles at 10-point intervals to better illustrate the full shape and variation across the distribution of the response curves. This choice allows us to capture asymmetric dynamics without over-fragmenting the data, which is particularly important given our unbalanced panel structure.

Table 2
SQREG estimation results.

Variables	Quantiles									
	$Q_{0.10}$		$Q_{0.25}$		$Q_{0.50}$		$Q_{0.75}$		$Q_{0.90}$	
pv	3.078***		2.903***		1.050		−0.470		−0.411	
	(0.851)		(0.631)		(1.012)		(1.100)		(1.795)	
gr		−1.248*		−1.986**		−0.200		0.169		1.142
		(0.654)		(0.913)		(0.763)		(0.927)		(1.755)
gdppc	4.492***	4.508***	4.086***	4.810***	1.904**	2.311***	1.633**	1.506*	1.456	0.793
	(1.005)	(1.000)	(0.998)	(1.279)	(0.793)	(0.780)	(0.803)	(0.785)	(1.236)	(1.300)
inf	−0.130*	−0.134*	−0.199**	−0.307***	−0.215***	−0.214***	−0.196***	−0.209***	−0.247**	−0.215*
	(0.074)	(0.078)	(0.080)	(0.094)	(0.055)	(0.054)	(0.051)	(0.059)	(0.104)	(0.124)
cap	−0.549***	−0.406*	−1.054***	−1.355***	−1.385***	−1.395***	−0.502	−0.534	−0.638	−0.666
	(0.173)	(0.237)	(0.195)	(0.204)	(0.208)	(0.211)	(0.326)	(0.328)	(0.589)	(0.612)
nim	0.230	0.168	0.817*	0.783*	0.839***	0.744***	−0.149	−0.018	−0.091	−0.201
	(0.414)	(0.380)	(0.467)	(0.473)	(0.267)	(0.258)	(0.253)	(0.285)	(0.586)	(0.586)
npl	0.016	−0.057	−0.064	−0.047	−0.126**	−0.136***	−0.195***	−0.191***	0.269	0.219
	(0.087)	(0.079)	(0.063)	(0.088)	(0.054)	(0.048)	(0.068)	(0.055)	(0.325)	(0.343)
cons	−23.42***	−21.97**	−14.28	−9.73	10.04	7.56	11.68*	12.19**	15.85	17.58
	(8.61)	(9.02)	(9.56)	(11.15)	(6.39)	(6.47)	(6.61)	(5.78)	(13.20)	(11.66)

Notes: $N = 287$ and Reps=500. Robust standard errors are in parentheses. Higher values of z-score indicate stronger bank stability (lower fragility). Higher political-stability (pv) values represent greater political stability, whereas higher geopolitical-risk (gr) values indicate higher risk exposure. ***, **, and * denote significance at the 1 %, 5 %, and 10 % levels, respectively.

Table 3
GPQR estimation results.

Variables	Quantiles									
	$Q_{0.10}$		$Q_{0.25}$		$Q_{0.50}$		$Q_{0.75}$		$Q_{0.90}$	
pv	**2.953*** **		**2.625*** **		1.376		−0.579		−0.394	
	(0.044)		(0.329)		(0.874)		(0.754)		(0.243)	
gr		**−1.454*** **		**−1.857*** **		−0.844		0.552		0.229
		(0.151)		(0.344)		(0.537)		(0.693)		(0.391)
gdppc	**4.586*** **	**4.519*** **	**3.502*** **	**5.180*** **	1.495	**1.130** **	1.414	**1.841** **	**1.792** **	0.666
	(0.030)	(0.106)	(1.217)	(1.480)	(1.014)	(0.514)	(0.926)	(0.755)	(0.703)	(0.504)
inf	**−0.132*** **	**−0.126*** **	**−0.203*** **	**−0.249*** **	**−0.194*** **	**−0.212*** **	**−0.184*** **	**−0.186*** **	**−0.223*** **	**−0.235*** **
	(0.002)	(0.008)	(0.041)	(0.029)	(0.020)	(0.024)	(0.029)	(0.025)	(0.027)	(0.022)
cap	**−0.541*** **	**−0.431*** **	**−1.065*** **	**−1.233*** **	**−1.319*** **	**−1.301*** **	**−0.376*** **	**−0.527*** **	**−0.489* **	**−0.724*** **
	(0.013)	(0.042)	(0.104)	(0.099)	(0.105)	(0.126)	(0.117)	(0.090)	(0.260)	(0.150)
nim	**0.229*** **	**0.176*** **	**0.720*** **	**0.732*** **	**0.639*** **	**0.516*** **	−0.121	−0.137	−0.323	−0.123
	(0.020)	(0.029)	(0.190)	(0.206)	(0.116)	(0.123)	(0.169)	(0.114)	(0.251)	(0.172)
npl	**−0.018*** **	**−0.041*** **	**−0.097* **	−0.066	**−0.141*** **	**−0.179*** **	**−0.196*** **	**−0.162*** **	**−0.282*** **	**−0.144* **
	(0.003)	(0.012)	(0.058)	(0.080)	(0.041)	(0.044)	(0.021)	(0.026)	(0.099)	(0.077)
cons	**−24.405*** **	**−21.063*** **	−8.719	−14.742	14.128	**21.074*** **	12.259	7.748	12.335	**23.469*** **
	(0.339)	(0.864)	(11.320)	(15.252)	(8.640)	(5.662)	(8.200)	(8.122)	(7.973)	(6.618)

Notes: $N = 287$, Draws=10,000, and Burns=3000. Robust standard errors are in parentheses. Higher z-scores correspond to greater bank stability. Higher pv values denote higher political stability; higher gr values denote increased geopolitical risk. ***, **, and * denote significance at the 1 %, 5 %, and 10 % levels, respectively.

performance, while Al-Shboul et al. (2020), Diab et al. (2023), and Shabir et al. (2024) highlight the stabilizing role of political institutions. The present study extends this line of work by demonstrating that these relationships are not uniform across the stability distribution: political stability has its greatest effect among fragile banking systems, whereas geopolitical risk exerts disproportionate pressure on the same segment. This distributional perspective provides a new dimension to the existing literature, emphasizing that institutional strength and exposure to external shocks interact asymmetrically across different levels of bank stability.

4. Policy discussions

The findings highlight a dual channel of foundational risk: political stability strengthens fragile banks while geopolitical risk undermines them, producing asymmetric effects that render uniform reforms insufficient. Political stability functions as a threshold condition, offering the greatest benefits to vulnerable systems, while geopolitical risk amplifies fragility and can offset macroeconomic gains. Taken together, these results challenge conventional reliance on market-based indicators by showing that institutional scaffolding is a precondition for resilience. Accordingly, effective financial stability policy must treat foundational risks as integral, combining domestic institutional reforms with macroprudential tools that incorporate geopolitical dimensions, such as stress testing and risk buffers. Multilateral institutions should support not only capital adequacy but also the broader institutional and security capacities of developing economies.

5. Conclusion

This study repositions foundational risks as core determinants of financial fragility in developing economies. By uncovering their asymmetric effects across the distribution of bank stability, the analysis challenges the prevailing assumption of homogeneity in risk transmission. Our results underscore the need to reconceptualize financial stability not solely as a function of macroeconomic policy, but as a product of institutional depth and geopolitical exposure. In doing so, the study offers a stratified view for both scholars and policymakers to understand where and for whom financial systems are most vulnerable. Future research should further explore the mechanisms through which foundational risks propagate through balance sheets and investor expectations, especially under prolonged institutional stress or regional instability.

CRediT authorship contribution statement

Mert Topcu: Writing – review & editing, Writing – original draft, Resources, Data curation, Conceptualization. **Ufuk Can:** Writing – review & editing, Writing – original draft, Software, Methodology, Data curation.

Acknowledgment

We are grateful to Editor Professor Tony Klein and to the anonymous reviewers for their insightful and constructive comments. The views expressed in this study are those of the authors and do not necessarily represent the official views of the Central Bank of the Republic of Türkiye.

Appendix

Fig. 1, Fig. 2.

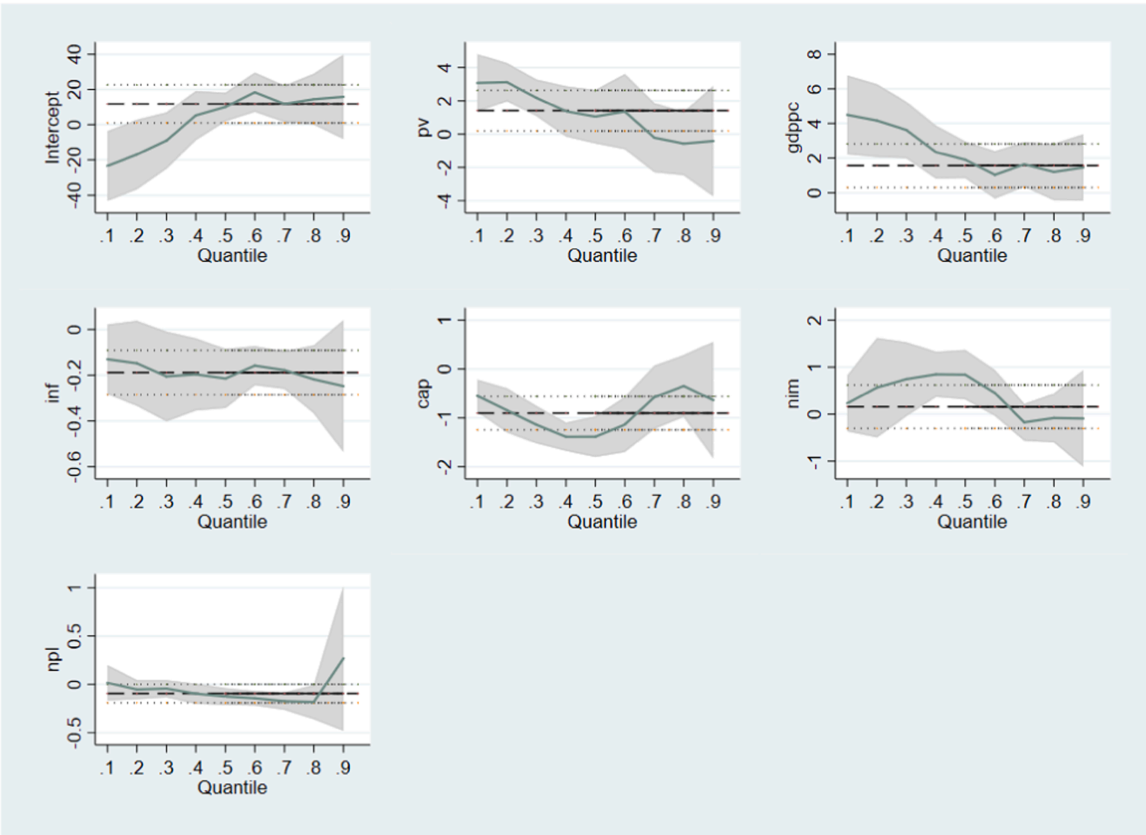

Fig. 1. SQREG estimation results (with pv).

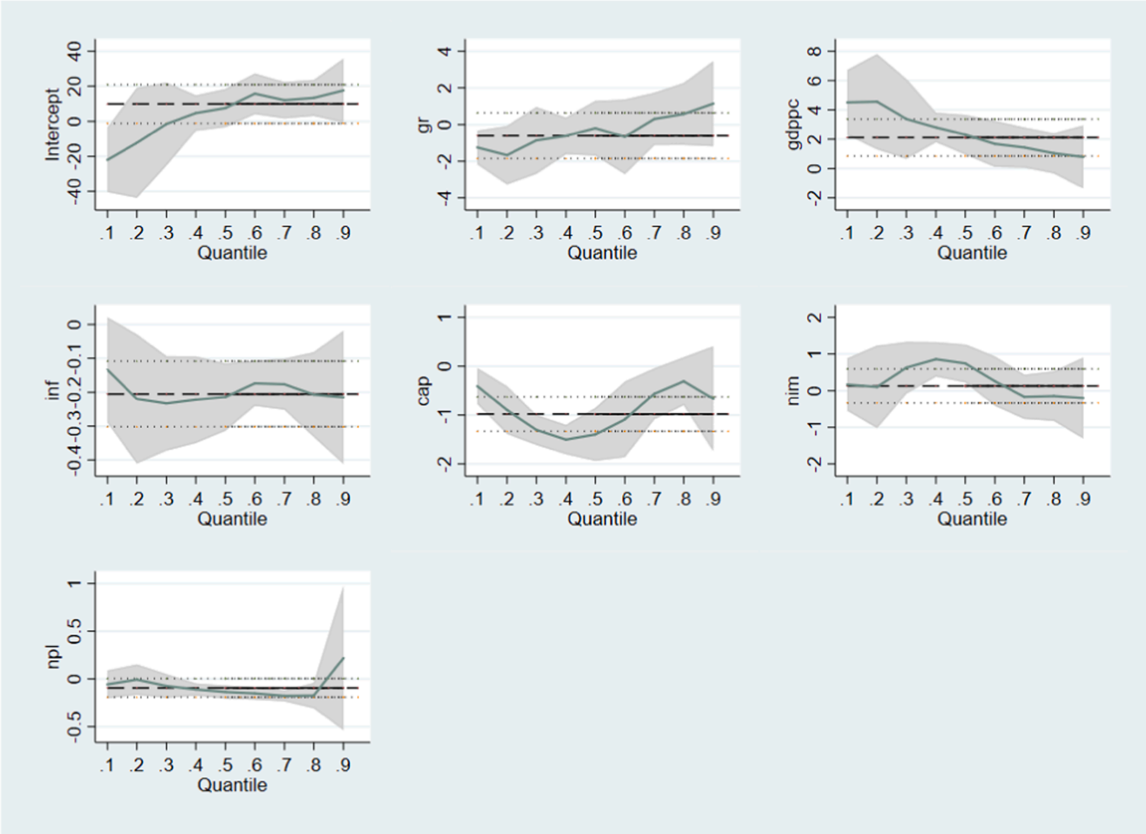

Fig. 2. SQREG estimation results (with gr).

Data availability

Data will be made available on request.

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