

Global Uncertainty and Economic Wellbeing: Investigating the Role of Institutional Quality

Camelia Ungureanu¹ and Andrei – Silviu Ungureanu²

¹Department of Finance, Accounting and Economic Theory, Faculty of Economic Sciences and Business Administration, Transilvania University of Brasov, Romania

²Independent Researcher, Romania

Keywords: *Uncertainty; Economic Wellbeing; Institutional Quality; Panel Data Analysis*

Introduction

It is well known that today's society is facing a series of challenges that possess considerable implications for both individual and collective well-being. In recent years, humanity has encountered several circumstances, such as geopolitical tensions, climatic challenges, economic and pandemic crises, which have influenced and persisted in influencing and maintaining widespread stress and uncertainty. The negative effects of perceived uncertainty on development and macroeconomic performances have been a subject of interest, as the papers Liu and Gao (2022) and Palmen (2022) highlight, focusing on different states or different country groupings. However, few studies have examined the moderating effect of institutional quality in the uncertainty-growth relationship at the state level. Thus, the novelty of the research lies in examining how public institutions may buffer economies against uncertainty, a topic rarely addressed for emerging economies.

Objectives

The main objective of this research is to explore the interplay between the perceived global uncertainty and economic well-being through GDP growth rate, with a focus on the role of public institutions in mediating the effects of uncertainty, for a sample consisting of developing countries from both Europe and Asia and the Pacific zones.

Methodology

To achieve the above-mentioned objective, the present study leverages panel data econometric techniques applied to recent cross-country datasets. More precisely, the dataset focuses on 20 states from both Europe and Asia and the Pacific zones, categorised by the International Monetary Fund as emerging economies, for the 2000-2023 period. The considered countries included in the panel are: Albania, Belarus, Bosnia and Herzegovina, Bulgaria, China, Croatia, Hungary, India, Indonesia, Lithuania, Malaysia, North Macedonia, Philippines, Poland, Romania, Russian Federation, Sri Lanka, Thailand, Turkiye and Ukraine. The econometric model employed is captured by the following regression equation:

$$gdpgr_{it} = \beta_0 + \beta_1 gdpgr_{it-1} + \beta_2 unc_{it} + \beta_3 unc * IQ_{it} + \beta_4 trade_{it} + \beta_5 fdi_{it} + \beta_6 gcf_{it} + \beta_7 gove_{it} + \beta_8 teda_{it} + \mu_{it} + \varepsilon_{it}$$

Where, *gdpgr*: growth rate of GDP, *gdpgr_{it-1}*: lagged value of the growth rate of GDP, *unc*: uncertainty, *unc * IQ*: interactive term (multiplied by uncertainty and IQ), *trade*: trade volume, *fdi*: foreign direct investment, *gcf*: gross capital formation, *gove*: government expenditure, *teda*: tertiary education attainment, μ_{it} : individual specific fixed effect, ε : white noise error term.

In this study, economic well-being is conceptualized specifically in terms of economic performance, through the growth rate (%) of Gross Domestic Product (GDP considered by the literature as a meaningful proxy for an economy's income-generating potential. However, it is well acknowledged that GDP alone cannot capture all characteristics of well-being as it is a broad concept that encompasses many aspects of society, including human development, inequality, environment, happiness and subjective life satisfaction, alongside economic performance. While broader measures such as the Human Development Index or composite latents may better capture multidimensional aspects of wellbeing, this study explicitly focuses on the economic aspect of wellbeing, using GDP as a proxy due to its availability, comparability across countries over long time periods, and its sensitivity to shocks and sociopolitical events. This approach allows a uniform, cross-country analysis, while acknowledging it represents only one aspect of the overall well-being. The four-quarter average of the World Uncertainty Index

(WUI), developed by Ahir et al. (2022), is used as a proxy for measuring the level of perceived uncertainty, in accordance with the paper of Ho and Gan (2021). The rest of the included variables in the model, such as trade openness (% GDP), foreign direct investments (% GDP), gross fixed capital formation (% GDP), government expenditures (% GDP) and tertiary education attainment (% total enrollment to the population of the age group), are used as control variables. The data collected is mainly extracted from the World Bank databases. The interaction term *uncertainty* $\times$ *IQ* is used to assess the moderating impact of institutional quality (IQ) on the relationship between uncertainty and economic wellbeing in the considered countries, following the methodological framework proposed by Ahsan et al (2021). In this study, institutional quality (score) is measured as the average of the six dimensions of the World Bank's governance indicators (WGI): control of corruption, rule of law, regulatory quality, government effectiveness, voice and accountability, political stability and absence of violence. This measure is widely used and validated in the literature due to its ability to provide consistent, comparable data across countries for such a multidimensional concept. IQ quantifies the capacity of public institutions to formulate and implement effective policies, legal framework, and to maintain a transparent environment that promotes economic development. Table 1 summarises key descriptive features of the considered variables.

Table 1: Descriptive Statistics for the 20 Countries Sample

Variable	Obs	Mean	Std. dev.	Min	Max
<i>gdpgr</i>	480	3.9411	4.1302	-28.7586	14.2309
<i>unc</i>	480	0.1786	0.1208	0.0000	0.7221
<i>IQ</i>	460	-0.1028	0.4894	-1.1206	1.0417
<i>trade</i>	475	90.2725	38.5225	25.9933	220.4070
<i>fdi</i>	480	3.7299	7.7911	-40.2629	106.4280
<i>gcf</i>	475	24.7633	6.0057	11.8695	44.5188
<i>gove</i>	475	15.9058	4.3577	6.5320	41.6840
<i>teda</i>	448	50.7422	22.8678	7.5585	127.5780

Source: Authors' calculations

Results and Discussions

Before presenting the panel data regression results, a series of tests has been applied to analyse the validity of the constructed model. The results of the Kao panel cointegration test demonstrated that the data is appropriate for panel data regression (ADF = -5.25, significant at 1% level) while the mean VIF of the model is equal to 1.30, proving that multicollinearity is not an issue and the chosen variables are valid.

Table 2: Results of the FEM and FGLS models

Independent variables	Dependent variable: <i>gdpgr</i>	
	(1) FEM	(2) FGLS
<i>lgdpgr</i>	0.0833 (0.0508)	0.1596*** (0.0492)
<i>unc</i>	-3.1892* (1.7025)	-1.4420 (1.4500)
<i>unc*IQ</i>	1.1660 (2.6895)	1.7689 (1.6237)
<i>trade</i>	0.0435*** (0.0134)	0.0053 (0.0050)
<i>fdi</i>	-0.0089 (0.0232)	-0.0251 (0.0193)
<i>gcf</i>	0.2014*** (0.0574)	0.1411*** (0.0296)
<i>gove</i>	-0.3327** (0.1427)	-0.0763* (0.0435)
<i>teda</i>	-0.0605*** (0.0138)	-0.0236*** (0.0088)
Constant	3.6934 (3.3941)	2.0926* (1.2297)
R-squared	0.1701	

Note: Standard errors are given in the parenthesis. *, ** and *** represents the variables are statistically significant at 10%, 5% and 1% level of significant respectively.

Source: Authors' calculation

Comparing the classic panel database analysis models (OLS, REM FEM), based on statistical tests (Breusch and Pagan Lagrangian multiplier test, Hausman Test and Sargan-Hansen Test), the Fixed Effects Model emerged as the most appropriate for the analysed database. According to Table 2, in the FEM scenario, we observe a significant negative relationship between uncertainty and economic growth. This can be explained through the fact that higher uncertainty, arising from geopolitical tensions, global events or shocks, can reduce investment and consumption, limiting economic activity and thus economic wellbeing. The interaction term *uncertainty* $\times$ *IQ* shows a positive coefficient, suggesting that higher institutional quality may mitigate the adverse effects of uncertainty through effective governance and a well-regulated legal framework. However, this interaction effect is not statistically significant. These results imply that while perceived uncertainty tends to reduce economic growth, countries with higher institutional quality, reflected by involved, transparent and efficient public administrations, may manage uncertainty better. The FGLS model corrects the limitations of the FEM in terms of autocorrelation and heteroskedasticity. While for the interaction term the results are similar as the ones for the FEM, in the case of uncertainty variable, under FGLS, it has a negative but statistically insignificant effect on growth, meaning the evidence is weaker in this model.

Conclusion and Policy recommendations

Risk and uncertainty are aspects of today's society, driven by global capitalism. They result from short-term profit and income maximisation, high capital mobility and from the states' interdependence from the perspective of global resources and financial networks, leaving economies vulnerable to sudden changes, increased volatility and global shocks. The main findings highlight the significant negative relationship between higher levels of perceived uncertainty and economic well-being, measured by GDP growth rate. Although the interaction between uncertainty and institutional quality is not statistically significant, its positive coefficient suggests that countries with higher institutional quality may be better positioned to buffer the adverse effects of uncertainty. From a policy perspective, the results emphasise the importance of strengthening the institutional framework, especially during times of uncertainty. Thus, current neoliberal policies should focus on promoting efficient public regulations and legislative

frameworks that ensure fair competition and strengthen institutional quality, which can safeguard social and economic stability. This can be achieved through investments in education and human capital, promoting meritocracy in the public sector, alongside increased transparency and digitalization, as well as the reduction of political interference in the public institutions, corruption and bureaucratic inefficiency, in line with the Public Choice doctrine. Without such measures, the current society risks further weakening institutional quality and amplifying perceived uncertainty. Finally, further research should address the current study's limitations, namely that GDP does not capture all dimensions of well-being, by using alternative approaches to quantify uncertainty and economic well-being, such as latent variables or multidimensional indicators, to provide a more comprehensive view. Future studies could also employ different econometric techniques to validate the findings.

References

- Ahir, H., Bloom, N., and Furceri, D. (2022), *The World Uncertainty Index* (No. w29763). National Bureau of Economic Research.
- Ahsan, T., Mirza, S.S., Al-Gamrh, B., Bin-Feng, C., and Rao, Z.U.R. (2021), How to Deal with Policy Uncertainty to Attain Sustainable Growth: The Role of Corporate Governance. *Corporate Governance: The International Journal of Business in Society*, 21(1), pp. 78-91.
- Ho, L.T., and Gan, C. (2021), Foreign Direct Investment and World Pandemic Uncertainty Index: Do Health Pandemics Matter? *Journal of Risk and Financial Management*, 14(3), p 107.
- Palmén, O. (2022), Macroeconomic Effect of Uncertainty and Financial Shocks: a Non-Gaussian VAR approach. *arXiv preprint arXiv: 2202.10834*.
- Liu, N., and Gao, F. (2022), The World Uncertainty Index and GDP Growth Rate. *Finance Research Letters*, 49, 103137.