



The Interaction of Innovation with Globalization and Institutional Quality on the Financial Wealth¹

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INTRODUCTION

Aristotle and later Adam Smith, regarded as the father of modern economics, defined economics as the science of wealth (Martinavicius, 2013), laying the foundation for economic inquiry. However, the mutual effect of innovation, globalization, and governance institutions on financial wealth has been relatively understudied in existing research. Therefore, this study aims to address this research gap by examining the interplay of these key variables. Given the unprecedented nature of this approach using secondary data from both domestic and international sources, the study seeks to investigate the mutual influence of innovation, globalization, and governance institutions on financial wealth. Specifically, the study focuses on 48 selected science-producing countries over the period 2011-2020. By analyzing various input variables such as the global innovation index, human capital and research, infrastructure, business complexity, market complexity, globalization, and governance, the research aims to shed light on the intricate relationships between these factors and financial wealth.

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METHODOLOGY AND PRESENTATION OF RESEARCH MODEL

$$WE_{it} = f(X_{it}, X_{it} * GL_{it} * GO_{it}) \quad (1)$$

$$X_{it} = f(INS, INF, HC, BC, MC) \quad (2)$$

To specify a suitable econometric model and comprehensively examine all aspects, various scenarios have been considered. The interaction effect of innovation, globalization, and governance is represented by $X_{it} * GL_{it} * GO_{it}$, while INS, INF, HC, BC, and MC denote institution and institutions, infrastructure, human capital and research, market complexity, and business complexity, respectively. Additionally, the current research model, a form of dynamic panel data analysis, includes the dependent variable interval (financial wealth per adult in a previous period) as an explanatory variable.

MODEL ESTIMATION

Prior to estimating the model, it is crucial to conduct unit root tests to ascertain the significance of the variables and prevent the occurrence of spurious regression. In this research, the Levin, Lin, and Cho (LLC) method was employed to assess the significance of the variables. The process of examining the invariance of the variables involves testing the null hypothesis (H_0) of the existence of a unit root, which, if not accepted, leads to the rejection of the assumption of variable invariance. Table (1) presents the results of this test.

Table 1. The results of the mean test of the variables

Variables	Test statistics	P- value	Result
Financial wealth per adult	-3.58	0.000	At the mana level
institution and institutions	-10.52	0.000	At the mana level
Infrastructure	-11.94	0.000	At the mana level
Human capital and research	-12.91	0.000	At the mana level
Market complexity	-19.35	0.000	At the mana level
Business complexity	-8.95	0.000	At the mana level
Globalization	-7.45	0.000	At the mana level
governing body	-5.17	0.000	At the mana level

Source: Research findings

Based on the results of the test, all variables are significant at the chosen significance level, indicating that there is no concern regarding the occurrence of spurious regression.

Table 2. The results of the model estimation ability test in the form of panel data

Model	F statistic of cross-sectional fixed effects	F statistic for time fixed effects	F statistic of cross section and time fixed effects
Mode 1: The effect of innovation inputs	122.75 (0.000)	13.85 (0.000)	109.44 (0.000)
Mode 2: the interaction effect of the index of innovation*globalization*dominance	157.32 (0.000)	21.60 (0.000)	134 (0.000)



Model	F statistic of cross-sectional fixed effects	F statistic for time fixed effects	F statistic of cross section and time fixed effects
Mode 3: The interplay of globalization*sovereignty*institutions	127.56 (0.000)	14.35 (0.000)	115.09 (0.000)
Mode 4: The interaction effect of globalization*sovereignty*human capital and research	124.48 (0.000)	14.25 (0.000)	111.42 (0.000)
Mode 5: The interaction of globalization*sovereignty*infrastructure	129.14 (0.000)	14.88 (0.000)	111.44 (0.000)
Mode 6: The interplay of globalization*dominance*market complexity	128.04 (0.000)	14.61 (0.000)	114.43 (0.000)
Mode 7: The interaction of globalization*dominance*business complexity	123.78 (0.000)	13.83 (0.000)	111.06 (0.000)

Source: Research findings

Comparing the test statistic results with the critical values in the table confirms the statistical significance of the bilateral integrated model in all cases.

Table 3. A guess made by Rosh Gashtawarha, his generalization

The dependent variable: Financial wealth	The first mode	The second mode	The third mode	The fourth mode	The fifth mode	The sixth mode	The seventh mode
LWEit-1	0.44 (0.000)	0.35 (0.000)	0.43 (0.000)	0.44 (0.000)	0.43 (0.000)	0.44 (0.000)	0.43 (0.000)
LINS	0.67 (0.000)	---	---	0.32 (0.000)	0.30 (0.001)	0.41 (0.000)	0.30 (0.000)
LHC	0.76 (0.000)	---	0.68 (0.000)	---	0.50 (0.000)	0.66 (0.000)	0.50 (0.000)
LINF	0.25 (0.00)	---	0.18 (0.000)	0.16 (0.000)	0.11 (0.002)	0.19 (0.008)	0.11 (0.002)
LBC	0.54 (0.00)	---	0.48 (0.000)	0.44 (0.000)	0.25 (0.000)	---	0.25 (0.000)
LMC	0.37 (0.000)	---	0.36 (0.000)	0.36 (0.000)	---	0.37 (0.000)	---
LINGiGo	---	0.98 (0.000)	---	---	---	---	---
LGtGo*INS	---	---	0.47 (0.000)	---	---	---	---
LGiGo*HC	---	---	---	0.65 (0.000)	---	---	---
LGiGo*INF	---	---	---	---	---	---	---
LGiGo*BC	---	---	---	---	---	0.48 (0.000)	---
LGiGo*MC	---	---	---	---	0.96	---	0.96

The dependent variable: Financial wealth	The first mode	The second mode	The third mode	The fourth mode	The fifth mode	The sixth mode	The seventh mode
					(0.000)		(0.000)
Sargan	47.08 (0.14)	47.62 (0.25)	47.38 (0.14)	47.10 (0.14)	46.89 (0.15)	47.42 (0.14)	46.89 (0.15)
Number of Obs	480						
Number of groups	480						

Source: Research findings

The coefficient of the dependent variable with a break is consistently positive and significant across all seven states of the model, aligning with theoretical expectations. This indicates that financial wealth in each period is positively influenced by the financial wealth of the previous period.

These findings hold potential significance for macroeconomic policymakers, particularly in transition countries. By informing the development of appropriate policies and detailed planning, these results can contribute to enhancing the financial wealth and overall status of these countries.

SUMMARY AND SUGGESTIONS

The results demonstrate that all innovation indicators (including institutions and institutions, human capital and research, infrastructure, market complexity, and business complexity) have a positive and significant effect on financial wealth. Additionally, the mutual effect of innovation, globalization, and governance indicators on financial wealth is positive and significant. Moreover, the combined effect of globalization and governance with innovation components on financial wealth is also positive and significant. Therefore, it is recommended that countries with low financial wealth focus on improving governance quality, leveraging globalization opportunities, and fostering innovation components to enhance financial wealth.

Keywords: Financial Wealth, Innovation, Globalization, Governance.

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