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CULTURAL TIGHTNESS-LOOSENESS AND STOCK MARKET INTEGRATION

Anita TODEA*
Babes-Bolyai University, Romania

Alexandru TODEA
Babes-Bolyai University, Romania

Abstract. This study examines the relationship between Cultural Tightness-Looseness (CTL) and stock market integration, focusing on a sample of 36 markets from 2004 to 2022. The analysis demonstrates that "loose" cultures, characterized by greater social flexibility, exhibit higher levels of financial integration with the global market. This relationship remains robust after controlling for alternative cultural determinants, such as genetic distance and Hofstede's dimensions. Additionally, the study investigates CTL's moderating effect on the relationship between global uncertainty and stock market integration. The findings reveal that in "loose" countries, the impact of global uncertainty on integration is less pronounced, suggesting a buffering effect. The results, validated through alternative specifications and robustness tests, extend the literature by identifying CTL as a unique cultural determinant of financial integration, distinct from long-term cultural barriers like genetic distance. These insights have implications for understanding market behavior under varying cultural and uncertainty conditions.

JEL Classifications: F15; F36; G15; O50

Keywords foreign portfolio investments; foreign bias; unfamiliarity; cultural tightness/looseness.

1. Introduction

The integration of local stock markets with the world market is an essential process for modern economies, opening access to financial resources and facilitating international capital flows. Among the of this integration are improved access for local companies to external funding and diversification of financing sources. This access

* Corresponding author. Address: Faculty of Economics and Business Administration, Babeş-Bolyai University, 58-60, Teodor Mihali Street, 400591, Cluj-Napoca, Romania, E-mail: anita.todea@econ.ubbcluj.ro

to global capital can stimulate private sector development and investments, reducing dependency on local financing and encouraging long-term economic growth. Additionally, stock market integration allows for better allocation of financial resources, enhancing the efficiency and liquidity of local markets and facilitating the transfer of knowledge and technology through the attraction of international investors (Stulz, 2005; Calessens, 2003). However, integrating local stock markets with the world market also brings a series of challenges. By opening up to global capital flows, local economies become more exposed to external shocks, such as sudden fluctuations in interest rates or asset prices. These shocks can amplify internal market volatility and create financial instability. Furthermore, a globally integrated stock market can attract speculative capital, which may be quickly withdrawn during times of crisis, leading to significant imbalances. Beyond these risks, stock market integration can deepen economic inequalities, favoring large corporations that have access to international financing, while small and medium enterprises remain dependent on local markets (Obstfeld, 2004; Kose et al., 2009).

In an increasingly interconnected global economy, stock market integration has become a central research theme, with significant implications for financial stability, efficient capital allocation, and risk diversification at the international level. Stock market integration reflects the degree to which national barriers are reduced, facilitating capital flows and promoting economic and financial convergence across markets. Literature suggests that higher integration between capital markets can reduce capital costs and contribute to more efficient allocation of financial resources but may also introduce greater vulnerability to global shocks (Bekaert and Harvey, 1995; Stulz, 1999).

The primary determinants of capital market integration encompass formal institutions, including political, economic, and institutional factors, as well as global financial uncertainty as an international factor (Bekaert et al., 2011; Lehkonen, 2015). Culture, as an informal institution, shapes human behavior and is undoubtedly an informal factor that can help explain varying levels of stock market integration. In this regard, Todea and Todea (2003) demonstrated that long-term cultural barriers, measured by genetic distance, are strongly associated with the degree of integration.

In this study, we demonstrate that cultural tightness-looseness (CTL) is also strongly associated with the level of stock market integration, with CTL serving as an additional cultural factor that complements long-term cultural barriers.

Cultural Tightness-Looseness (CTL)—defined as the degree of strictness or flexibility of social norms and tolerance toward behaviors that deviate from these norms—represents one such factor with potential impact on the openness of national markets to the global marketplace. In countries characterized by a “loose” culture, social norms are more flexible, and there is greater tolerance for behavioral diversity and for risks associated with international exchanges. Conversely, in “tight” countries, norms are stricter, and tolerance for unconventional behavior and risks is lower, which may limit economic openness and capital market integration (Gelfand et al., 2011). Existing literature highlights the importance of cultural norms in shaping the economic and financial behavior of a country (La Porta et al., 1997; Guiso et al., 2006). Cultural Tightness-Looseness can influence not only individual and organizational behaviors but also the openness of capital markets, as “loose” economies tend to be more open to cross-border interactions and are less constrained by strict rules on

foreign investments. In this context, a low level of "tightness" can facilitate capital market integration since culturally relaxed societies are more likely to accept and adopt the structures and practices specific to global markets. Thus, the first hypothesis of this study is:

- *H1: There is a positive relationship between "loose" culture and stock market integration.*

In addition to its direct effect, CTL may play a moderating role in the relationship between stock market integration and global uncertainty. High levels of global uncertainty, reflected by indicators such as International Political Risk, VIX, US Money supply growth or TED spread (see Lehkonen, 2015), significantly affect capital flows and financial market stability. In contexts marked by high uncertainty, countries with higher levels of "tightness" tend to show greater resistance to volatility, which may lead to capital withdrawals and increased volatility. On the other hand, countries with a "loose" (flexible) culture may moderate the negative effects of global uncertainty on integrated markets, as higher cultural flexibility promotes greater tolerance toward international uncertainty and risks (Gelfand et al., 2011). Therefore, the second hypothesis of this study is:

- *H2: Cultural Tightness-Looseness (CTL) moderates the relationship between stock market integration and global uncertainty, such that the effect of uncertainty on markets is less pronounced in "loose" countries.*

Using panel data from 39 countries for the period 2004-2022, the results validate the two formulated hypotheses and contribute to the literature in multiple directions. First, a new cultural factor (i.e., CTL) is identified, adding to those already highlighted in the literature, such as cultural, religious, or linguistic distances (see Patell et al., 2022 for a detailed survey). Second, this study aligns with the literature that emphasizes the role of culture in the incorporation of information into stock prices (Eun et al., 2015; Todea, 2022; Todea and Todea, 2023). Lastly, this study connects the literature on CTL to international finance (Todea and Harin, 2023).

2. Data and variables

2.1. Sample

The sample consists of 36 stock markets, comprising 17 developed and 19 emerging markets. The selection of this sample results from applying three successive filters. The first filter considered all stock markets that currently have or previously held either developed or emerging market status, according to MSCI classifications. The second filter retained only countries that maintained one of these two statuses—developed or emerging—for at least half of the period analyzed (2004-2022). The third filter finalized the sample by including only those markets for which measures of the primary variable of interest, Cultural Tightness-Looseness (CTL), were available. Table 1 presents the country structure of the final sample, the stock market indices used in measuring integration, and statistics regarding the average integration and CTL values.

Table 1. The sample structure and statistics

Country	Stock index	Integration	CTL
Developed Markets			
Austria	ATX	0.8967	75.80
Belgium	BEL 20	0.8891	119.80
Canada	TSX 60	0.8866	84.60
Denmark	OMX 20	0.9021	65.50
Finland	OMX 25	0.7939	74.50
France	CAC 40	0.9475	99.60
Germany	DAX 30	0.9163	82.90
Ireland	ISEQ 20	0.8712	71.20
Italy	FTSE-MIB	0.9191	67.80
Japan	Nikkei 225	0.9742	43.30
Netherlands	AEX 25	0.9222	78.90
Portugal	PSI 20	0.8367	78.60
Singapore	STI 30	0.9475	55.20
Spain	IBEX 35	0.9039	83.90
Sweden	OMX 30	0.8581	87.90
U.K.	FTSE 100	0.8353	89.30
U.S.	SP 500	0.8005	58.00
Emerging Markets			
Argentina	Merval 25	0.3159	75.00
Chile	IGPA	0.3945	86.80
Czech Republic	PX	0.5619	59.60
Egypt	EGX 30	0.0807	3.90
Greece	ATHEX	0.4125	58.30
Hungary	BUX 20	0.4340	42.80
India	Nifty 50	0.3465	43.70
Indonesia	LQ45 Index	0.3441	3.10
Korea (South)	Kospi 50	0.5192	20.10
Mexico	IPC 35	0.5029	74.70
Morocco	MASI	0.1517	0.00
Pakistan	KSE 100	0.0391	0.00
Peru	BVL 25	0.3389	52.30
Philippines	PSEi 30	0.2851	31.50
Poland	WIG20	0.5396	42.80
Russia	RTS index	0.3974	57.20
Saudi Arabia	Tadawul	0.1005	22.40
South Africa	JSE 40	0.6081	67.60
Turkey	BIST 30	0.3004	12.50

2.2. Dependent variable: stock markets integration

We utilize a *stock market integration* measure based on a multi-factor APT model developed by Pukthuanthong and Roll (2009). Their approach assumes that if markets are perfectly integrated with the global market, their assets will be equally exposed to the same global shocks. Consequently, the measure of integration is derived from the R-squared value of a multi-factor model. To construct this measure,

we extract daily closing prices of stock market indices, denominated in USD, for the period from January 2003 to December 2022, using the Refinitiv Eikon database. The global factors, totaling 10, are derived through Principal Components Analysis (PCA) from the return series of 20 developed market stock indices, along with 1-day lagged returns from the U.S. to adjust for nonsynchronous trading due to time zone differences. Similar with Todea and Todea (2023), we excluded Finland, Israel, and New Zealand from the developed market sample due to their relatively small share of global stock market capitalization. For each year from 2003 to 2021, we calculate and rank the eigenvectors and eigenvalues. The first 10 principal components explain over 85% of the cumulative eigenvalues. These principal components, which represent the global factors, are then estimated from the returns of stock market indices for the subsequent calendar year. This procedure is repeated annually, producing global factors for the period 2004–2022. Finally, we estimate adjusted R-squared values by regressing the annual daily returns of each stock market index against the global factors.

2.3. Independent variables

2.3.1. Cultural tightness looseness

In this study, we employed the combined *CTL* (Cultural Tightness-Looseness) index introduced by Uz (2015). This index is based on data from the 2000 survey wave conducted by the European Values Study Group and the World Values Survey Association (EWVS). Uz (2015) developed three CTL indices to capture cultural variation: the domain-specific index, the domain-general index, and the combined index. The combined index was created by organizing survey questions into relevant domains and calculating the average standard deviation of these variables. This computation was further refined using emic weights, which reflect the significance of each domain as reported by respondents in each country.

To ensure the reliability of the selected questions, Uz applied a thorough filtering process and found that the weighted averages of standard deviations in the domains of work, family, and religion best represented cultural tightness-looseness, collectively accounting for 54.4% of the variance in CTL. Out of the three indices, we selected the combined CTL index due to its superior performance compared to the other measures (Uz, 2015). In our dataset, Morroco and Pakistan emerged as the "tightest" nation, with a CTL index of 0, while Belgium was the "loosest," with a CTL index of 119.8.

2.3.2. Control variables

In selecting control variables, we drew upon influential studies in the literature, particularly those by Bekaert et al. (2011) and Lehkonen (2015), which identify key determinants of integration through econometric selection procedures. Following the approach of the recent study by Todea and Todea (2023), we adopted the variables identified by Lehkonen (2015) in the final column of Table V on page 2064. Detailed descriptions of these variables can be found in Appendix 2 of Lehkonen (2015). We introduced a few modifications to this list. Due to the unavailability of the *Risk Profile*

from the ICRG Table 3, we used the sum of the six components capturing risk profile data as provided by the Political Risk Services International Country Risk Guide (PRS), and accessed from World Bank Database.. For *Equity Market Openness*, we employed the *Equity Inflow Restrictions* measure developed by Fernandez et al. (2016), which we rescaled to ensure that a higher value indicates greater openness.

Among these control variables, those capturing international uncertainty—namely *International Political Risk*, *TED Spread*, *VIX*, and *U.S. Money Growth*—will be the focus of interest in analyzing the effect of their interaction with CTL on stock market integration, as outlined in Hypothesis 2.

3. Empirical results

To examine the association between CTL and stock market integration, we will use pooled country-year data in the following format:

$$Integration_{l,t} = \alpha_0 + \alpha_1 CTL_{l,t} + \mathrm{B}X + cTrend + \varepsilon_{l,t}$$

where $Integration_{l,t}$ is stock market integration of local country l in year t; $CTL_{l,t}$ is Cultural Tightness Looseness of country l 1; X is a vector of control; *Trend* is deterministic trend; $\varepsilon_{l,t}$ is the residual variable. Such a model can be estimated using various methods, but for the main results, we opted for pooled OLS, following the approach of Lehkonen (2015) and Todea and Todea (2023). To account for the potential presence of intragroup correlation and heterogeneity, we adjusted the standard errors of the parameters using the cluster option by country.

The association between CTL and stock market integration is analyzed in Table 2. In the baseline model presented in Column (1), the positive and significant coefficient of the CTL variable suggests that looser countries are more strongly integrated with the global market compared to tighter countries. To complement the statistical significance with economic relevance, we estimated standardized beta coefficients for the baseline model in Column (2). The results indicate that CTL has one of the largest marginal effects, comparable only to that of the Risk Profile. Specifically, a one-standard-deviation increase in CTL corresponds to a 34.59% rise in stock market integration.

In Column (3) of Table 2, we investigated the CTL–Integration relationship while accounting for the potential presence of endogeneity. In this study, endogeneity may arise for two reasons. First, the CTL variable of interest may be measured with error, as it is derived from WVS surveys. Second, despite the inclusion of numerous control variables, the issue of omitted variable bias persists due to cross-sectional heterogeneity. Since CTL is time-invariant, it does not allow for the use of fixed effects in the cross-section. The potential endogeneity stemming from reverse causality between CTL and Integration is unlikely, given that CTL evolves slowly over time and cultural traits developed long before the emergence of stock markets.

Table 2. The impact of cultural tightness-looseness on the stock markets integration

	(1) Base model	(2) Beta (%)	(3) 2SLS	(4) Developed markets	(5) Emerging markets
Cultural tightness looseness (CTL)	0.0036*** (4.02)	34.59	0.0059*** (2.99)	0.0002 (0.24)	0.0031*** (3.23)
Political risk	0.1416*** (3.10)	39.27	0.0204 (0.24)	-0.0656 (-1.20)	0.0721* (1.77)
Openness	0.1974** (2.09)	17.84	0.1302** (2.18)	0.1610 (1.32)	0.0258 (0.51)
International Political Risk	0.0017* (-1.67)	-3.31	0.0005 (0.55)	-0.0011 (-1.17)	0.0029*** (-2.76)
Legal origin (French)	0.0136 (0.25)	2.15	-0.0754 (-0.79)	-0.0423 (-0.75)	0.0083 (0.18)
Past Equity Market Returns	0.0149 (1.20)	1.53	0.0327* (1.82)	0.0195 (1.28)	0.0241* (1.73)
Local crisis	-0.0737* (-1.97)	-7.53	-0.0969** (-2.56)	0.0122 (1.23)	-0.0712*** (-2.72)
Exchange rate	-0.1349* (-1.66)	-3.62	-0.2762*** (-3.51)	-0.0901 (-1.62)	-0.1060 (-1.32)
Local Market Turnover	0.0006*** (2.94)	12.89	0.0007** (2.26)	-0.0001 (-1.43)	0.0004* (1.83)
Inflation	-0.0029** (-2.23)	-6.95	-0.0048*** (-3.00)	-0.0023 (-1.12)	-0.0023** (-2.25)
Past Local GDP Growth	0.0030 (1.10)	3.65	0.0066* (1.86)	0.0016* (1.69)	0.0060* (1.87)
TED Spread	-0.0094 (-0.57)	-1.61	-0.0172 (-1.03)	-0.0124 (-1.04)	0.0438** (1.99)
VIX	0.0091*** (6.40)	18.33	0.0108*** (7.73)	0.0052*** (4.76)	0.0137*** (9.98)
U.S. Money Growth	0.2614** (2.59)	4.21	0.2963** (2.29)	0.0056 (0.08)	0.3568** (2.34)
Phones	0.0015*** (3.11)	18.12	0.0016*** (4.10)	0.0003 (0.88)	0.0010 (1.61)
Life Expectancy (log)	-0.7999 (-0.80)	-8.44	0.4862 (0.52)	3.7061*** (3.09)	-1.4862* (-1.96)
Population Growth	0.0178 (1.06)	6.08	0.0371*** (3.24)	0.0033 (0.68)	-0.0643** (-2.35)
Trend	-0.0004 (-0.17)	-0.73	-0.0039* (-1.70)	-0.0048*** (-3.02)	-0.0010 (-0.35)
N	684	684	684	323	361
Adj./Centered R2	0.765	0.765	0.754	0.318	0.592

Notes: In brackets are the *t* of the regression coefficients based on standard errors estimated with country cluster. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels

In order to address the potential endogeneity of the CTL variable, we employed a two-stage least squares (2SLS) approach, using *Kinship* and *Religion Fractionalization* as instrumental variables. The kinship index is from Enke (2019), and the values for religion fractionalization are from Alesina et al. (2003). The use of 2SLS is particularly

relevant in this context, as it allows us to mitigate the bias that could arise from measurement errors and omitted variable bias, both of which are concerns when analyzing the relationship between CTL and stock market integration. The choice of Kinship and Religion Fractionalization as instruments is grounded in theoretical considerations related to the factors that shape cultural tightness-looseness. Kinship, as a form of social structure, plays a key role in defining the norms and values that underpin a society's cultural characteristics. Societies with strong kinship ties tend to emphasize conformity and social control, which can be associated with higher cultural tightness. On the other hand, societies with weaker kinship structures often exhibit more individualistic tendencies, contributing to greater cultural looseness. Kinship ties, therefore, are likely to be correlated with CTL but not directly with stock market integration, making them a valid instrument in this context. Religion Fractionalization, similarly, provides an important cultural dimension that influences societal norms and behaviors. Societies with high religious diversity often face greater challenges in terms of social cohesion, which can lead to more relaxed cultural norms and lower levels of social control, thus contributing to cultural looseness. Conversely, societies with more homogeneous religious beliefs tend to exhibit tighter social norms and greater conformity. As with kinship, religion fractionalization is theoretically connected to CTL but is not likely to be directly related to stock market integration, making it an appropriate instrument.

In Column (3) of Table 2, the 2SLS results confirm a strong positive association between CTL and stock market integration, reinforcing our main findings. This suggests that, after addressing the endogeneity concerns, the relationship between CTL and market integration remains robust, and the choice of Kinship and Religion Fractionalization as instruments is validated. Thus, these results further strengthen the validity of our analysis and underscore the importance of cultural factors in explaining variations in stock market integration across countries.

Developed markets exhibit a very high level of integration with the global market, and at the same time, the majority of these markets tend to be more loose than tight. In contrast, emerging markets show much greater variability in both integration and CTL. It is therefore likely that the CTL-Integration association observed across the full sample is primarily driven by emerging markets. To investigate this, we re-estimated the baseline model separately for developed and emerging markets. The results in Columns (4) and (5) of Table 2 show that the CTL coefficient is positive and significant only in the case of emerging markets, thus confirming our hypothesis.

In Table 3, we investigated Hypothesis 2 of this study by considering interaction effects and introducing the product of CTL with various measures of global uncertainty: in Column 1, the interaction between CTL and the International Risk Profile; in Column 2, between CTL and the TED Spread; in Column 3, between CTL and the VIX; and in Column 4, between CTL and U.S. Money Growth. To improve the interpretation of the parameters of the interacting variables, they were centered.

The results show that, in all cases, the coefficients of the product terms between CTL and the uncertainty variables are negative and statistically significant. The negative sign of these interactions suggests that, at a certain level of global uncertainty, countries with higher CTL (looser countries) become less integrated into global financial markets, meaning they respond less to global external factors. This phenomenon can be explained by the cultural characteristics of looser countries, which, although more flexible and tolerant of change, may not absorb external shocks

as efficiently as tighter societies, despite being more open to external influences. In looser cultures, characterized by more flexible social norms and a more relaxed attitude toward risk, financial markets may be less anchored in traditional behaviors and more vulnerable to changes in the global economic environment. This suggests that, in the face of significant increases in global uncertainty, these countries might integrate external factors less effectively into their economic behaviors, leading to a decrease in financial market integration. In contrast, countries with a lower CTL (tighter countries), which are characterized by more rigid social norms and greater risk aversion, may respond more consistently and stably to global uncertainty, incorporating external shocks more rapidly into their stock markets. Therefore, the interaction between CTL and uncertainty variables indicates that, in the context of global economic and political uncertainty, looser nations are less exposed to global shocks than tighter ones.

Table 3. Impact of CTL on Integration with global determinants interaction terms

	(1) Interaction with International Political Risk	(2) Interaction with TED Spread	(3) Interaction with VIX	(4) Interaction with U.S. Money Growth
Cultural tightness looseness (CTL)	0.0036*** (4.00)	0.0036*** (3.96)	0.0036*** (4.05)	0.0036*** (4.02)
International Political Risk	0.0017* (1.68)			
TED Spread		-0.0101 (-0.61)		
VIX			0.0091*** (6.47)	
U.S. Money Growth				0.2639*** (2.68)
CTL × International Political Risk	-0.0001* (-1.78)			
CTL × TED Spread		-0.0008* (-1.93)		
CTL × VIX			-0.0001** (-2.51)	
CTL × U.S. Money Growth				-0.0044* (-1.68)
Control variables	Yes	Yes	Yes	Yes
N	684	684	684	684
Adj. R2	0.765	0.767	0.768	0.765

Notes: In brackets are the *t* of the regression coefficients based on standard errors estimated with country cluster. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

4. Robustness tests

In the baseline regression presented in Column (1) of Table 2, we employed pooled OLS to align with the methodology adopted in relevant studies from the literature (Lehkonen, 2015; Todea and Todea, 2023). While there are numerous arguments both for and against the use of OLS, we sought to strengthen the robustness of our

baseline results by employing alternative specifications and estimation methods. In Column (1) of Table 4, we continued to use OLS but replaced the deterministic trend with year fixed effects to account for temporal variations. Column (2) of Table 4 shifts focus to potential cross-sectional heterogeneity that might not be fully captured by the selected control variables. Given that CTL is time-invariant, we opted for random effects instead of fixed effects. To address potential endogeneity concerns, we instrumented CTL using *religion fractionalization* and *kinship*, as shown in Column (3) of Table 4. Finally, recognizing the strong persistence of the Integration variable, we employed the system GMM estimator in Column (4) of Table 4. The positive and statistically significant coefficient of CTL across all these alternative specifications corroborates the baseline regression results and lends strong support to Hypothesis 1 of the study.

Table 4. Alternative estimation methods

	(1) Time fixed effects	(2) Random effects	(3) Random effects with IV	(4) GMM system
Cultural tightness looseness (CTL)	0.0035*** (3.65)	0.0047*** (4.84)	0.0053** (2.45)	0.0044** (2.88)
Control variables	Yes	Yes	Yes	Yes
N	684	684	684	684
Adj./Centered R2	0.785	0.732	0.761	-

Notes: In brackets are the *t* of the regression coefficients based on standard errors estimated with country cluster. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

In all the empirical results presented, we measured the strictness-flexibility of social norms using Uz's (2015) CTL combined index, chosen for its superiority in facilitating international comparisons relative to the other two measures developed by Uz (2015). To further validate our findings, we estimated the baseline regression using alternative measures of CTL. Specifically, in Columns (1) and (2) of Table 5, we employed the CTL domain-specific index and the CTL domain-general index, respectively. The positive and statistically significant coefficients of these alternative measures further support Hypothesis 1, reinforcing the robustness of our results.

CTL captures a cultural component that may be strongly correlated with long-term cultural differences (proxied by genetic distance) or cultural values. However, in the final two columns of Table 5, we demonstrate that CTL is a distinct construct that explains stock market integration independently of these factors.

In Column (3) of Table 5, we controlled for genetic distance from the world market, a variable shown to be strongly associated with stock market integration (Todea and Todea, 2023). In Column (4), we included the five cultural dimensions developed by Hofstede (2010), which are potentially correlated with CTL. The positive and statistically significant coefficient of CTL in both columns indicates that the strictness-flexibility of social norms, as measured by CTL, represents a unique informal institution associated with integration, distinct from long-term cultural barriers or cultural values. These findings suggest that the results of this study are complementary to those of Todea and Todea (2023).

Table 5. Impact of CTL on Integration: other tests

	(1)	(2)	(3)	(4)
CTL domain-specific	0.0031*** (2.92)			
CTL domain-general		0.0021*** (3.06)		
Cultural tightness looseness (CTL)			0.0036*** (4.09)	0.0046*** (5.45)
Genetic distance			-1.4247 (-0.49)	
Individualism				-0.0005 (-0.47)
Uncertainty Avoidance				-0.0026*** (-2.77)
Power distance				-0.0010 (-0.94)
Masculinity				0.0020*** (2.64)
Long term-orientation				0.0028** (2.55)
Control variables	Yes	Yes	Yes	Yes
N	684	684	684	684
Adj. R2	0.761	0.769	0.772	0.810

Notes: In brackets are the *t* of the regression coefficients based on standard errors estimated with country cluster. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

5. Conclusions

This study provides a novel contribution to the literature by exploring the relationship between Cultural Tightness-Looseness (CTL) and stock market integration, positioning it as a distinct cultural determinant beyond the framework established by Todea and Todea (2023). While their research highlighted the significant role of genetic distance as a long-term cultural barrier affecting stock market integration, our investigation shifts the focus to the flexibility of social norms as captured by the CTL index. This focus reveals new insights into the cultural underpinnings of market behaviors, demonstrating that CTL is an independent and complementary construct to genetic distance in explaining cross-country variations in integration levels.

Our findings robustly validate both hypotheses. Hypothesis 1, which posits a positive relationship between “loose” culture and stock market integration, is consistently supported across various model specifications. The positive and statistically significant coefficients of the CTL index, even when controlling for factors such as genetic distance and Hofstede’s cultural dimensions, underscore the unique role of CTL in shaping integration. Furthermore, the robustness checks—ranging from alternative measures of CTL to addressing potential endogeneity—strengthen the credibility of this result. Hypothesis 2, which asserts that CTL moderates the relationship between stock market integration and global uncertainty, is also validated. The interaction terms between CTL and various measures of global uncertainty, including International Risk Profile, TED Spread, VIX, and U.S. Money Growth, consistently exhibit negative

and statistically significant coefficients. These results suggest that “loose” countries, characterized by greater social flexibility, respond less strongly to external shocks, integrating global uncertainty into their markets to a lesser extent than “tight” countries. This moderating role of CTL highlights its potential to buffer the adverse effects of global uncertainty on financial markets.

The originality of this study lies in its integration of CTL as a novel explanatory variable in financial market integration research. By demonstrating that CTL operates as an independent cultural determinant, distinct from long-term barriers like genetic distance, this research broadens the scope of cultural economics. The findings also have practical implications for policymakers and investors, suggesting that cultural characteristics should be considered when assessing the resilience of financial markets to global uncertainty.

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