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Beyond Digital Connectivity: Unveiling the Pathways to Financial Stability in Developing Economies

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Abstract

As developing countries continue to develop the connectivity infrastructure and tourism industry simultaneously, there have been very few studies that attempt to understand the impact of both of these on the soundness of their financial systems. The current study attempts to analyze the impact of digitalization and tourism on the stability of the financial system in developing countries and whether the effect of tourism on stability is moderated by the quality of institutions. Digitalization is used as an independent variable only and is captured through a composite index using PCA. The quantitative research design with panel data of 40 developing countries was used for the period 2010-2025. To address the potential persistence of financial stability and endogeneity of the explanatory variables, the dynamic panel estimation method was used. Digitalization and tourism receipts were considered as important explanatory variables; financial stability was the dependent

variable, and institutional quality was included as a moderating variable within the empirical framework. The results showed that institutional support for the tourism receipts financial stability relationship was not statistically supported, but tourism receipts were highly associated with financial stability. The study contributed to the literature by introducing digitalization and tourism's receipts into the financial stability framework and by showing that tourism related economic activity was an important part of the broader macro financial environment. The results indicated that the digitalization, tourism activity and institutional development and financial-sector regulation are systemic and should have been viewed as such by policymakers while developing policies for financial stability. The study also served as a foundation for other studies that will investigate nonlinear relationships, institutional thresholds, country-specific variations, and other indicators for financial stability.

Keywords: Digitalization, Tourism Receipts, Institutional Quality, Financial Stability, Developing Countries

1. Introduction

There are many developing countries which are relying on two factors at a time: digital technology and tourism. Digital payments like mobile money, Internet banking, and a secure Internet environment are increasing access to finance, whereas tourism creates foreign exchange income, job creation, and an increase in lending from banks. Whether these factors make banking systems more robust or fragile is still unknown; it may actually depend on other institutions surrounding them.

On one hand, there are two arguments against the above claim. The first argument states that digital communication decreases transaction cost, increases deposit base, provides necessary information for credit scoring and diversification, which will result in improved solvency and decreased loan losses. On the other hand, rapid growth in digital technology will drive the banks to risky markets, increased fixed investment cost, thinning margin due to competitive pressures and exposure to cybersecurity risks and third parties. Recent cross-country analysis has shown the above divide. By using 143 countries during 2010-2021 period, Le et al. (2026) have found a negative relation between digitalization and Z-scores and higher NPLs in their sample.

The effects of tourism on output, employment, investment, and foreign exchange are the main topics of the literature on tourism development and growth. Financial stability is not the same as economic growth. Growing financial risks in the economy, such as those brought on by increased credit growth, rising asset prices, industry concentration, or reliance on erratic demand from outside, can coexist with growth in tourism and economic activity. Therefore, rather of focusing on how tourism may affect the financial system's resilience, the current study examines how tourism affects a region's economic growth (D. Sun et al., 2025). There is theoretical relevance to the relationship between financial inclusion and tourism receipts. SMEs in the tourism industry, in particular, require funding to start and expand their enterprises. Travelers are increasingly using formal and electronic payment methods, and travel-related firms are looking more and more to banking services for payment, investment, cash flow management, and working capital access. The transfer of tourism-related economic activity into the official financial sector can then be facilitated by increased financial inclusion. In the meantime, tourism-related financial sector activities might increase demand for financial services and promote the expansion of financial institutions' reach (Balli et al., 2024; Saif-Alyousfi & Saha, 2021). This creates the chance to create a positive feedback loop between travel and financial inclusion. However, the benefits of this partnership will differ in various developing countries. Whether the receipts are converted into profitable investments and financial resilience or into financial vulnerabilities depends entirely on the institution's quality. In addition to strengthening financial oversight, lowering corruption, improving investment allocation, and boosting the legitimacy of economic policies, good institutions can assist raise the transparency of how tourism-related money is managed. Conversely, weak institutions can result in excessive risk-taking, poor public investments, revenue leakage, and credit misallocation. As a result, the institutional environment may have an impact on how financial activity supports or undermines the tourism industry's financial stability (Rao & Kumar, 2025). The following argument is the primary reason to investigate institutional quality as a moderating mechanism rather than merely as an independent variable. A conventional model would try to measure the distinct effects on financial stability of financial inclusion, visitor receipts, and institutional quality. However, this type of model would not be able to determine whether the institutional environment strengthens or weakens the relationship between financial inclusion and financial stability, or if the institutional environment strengthens or weakens the association between tourism receipts and financial stability. Additionally, the IMF has recently

shown that aggregate measures of financial access do not show the systemic impact of financial inclusion. This suggests that it is crucial to research not only the effects of financial inclusion but also when and how it affects financial stability.

Tourism is a significant contributor to foreign exchange earnings, employment, investment, entrepreneurship, infrastructure development, and the growth of the service sector in many developing countries and is a major source of external income to these economies (Saif-Alyousfi & Saha, 2021). The tourism economic activity carries out transactions in the accommodation and transportation sector, in the catering sector, in the retail sector, in the entertainment sector, in the financial sector and others. Even though the tourism sector is expanding, businesses within tourism value chains may need formal banking services, payment facilities, credit and insurance financing, and investment financing more in the future. There are multiple ways that tourism receipts can impact an economy's financial stability. Incoming foreign-exchange from tourism can improve the balance of payments and external liquidity. The growing tourist flow can lead to higher levels of household and business incomes, with higher incomes for firms making it easier to repay debts, and demand for financial services (Balli et al., 2024; Gnangnon, 2020). Tourism investment can also increase the demand for credit and encourage financial intermediation. These channels can indirectly reinforce the domestic financial systems because of the amount of tourist revenue generated (Haq et al., 2024).

The impact of tourism on economic growth, employment, investment, foreign exchange earnings and development has been extensively studied in the past (Khemthong et al., 2024). But, in comparison, little attention has been paid to digitalization and tourism receipts as a financial stability determinant. This question becomes even more pertinent for developing countries where many of such economies rely on international tourism and at the same time have relatively shallow financial systems. Tourism economies are highly exposed to external shocks and tourism receipts can be a source of financial strength or a conduit for external shocks into the domestic financial system. The significance of the research problem is raised when the four dimensions are considered together, that is, digitalization, tourism receipts, and institutional quality. Existing literature mostly considers these relationships in isolation (Sadekin, 2025). The research of digitalization and tourism typically focuses on tourism growth, employment, sustainability, foreign exchange, or another theme. Research of institutional quality typically focuses on governance as a stand-alone factor that affects economic and financial performance.

There are three research gaps which this study intends to address. First, the link between tourism and stability in developing countries is not studied at the national level, and hardly ever is digitalization taken into account in such studies. Second, stability is always quantified by using a single measure; the combination of Z-score, non-performing loans ratio and capital ratio, on the other hand, accounts for insolvency risks, asset quality and loss absorbing capacity. Finally, while institutional quality is normally used as a control variable, it is actually a conditional variable for the tourism-stability link. In this paper, a digitalization index based on PCA of internet use, mobile phone subscription and secure servers will be created and included in the model as the only independent variable; tourism and institutional quality will be the other two independent variables in the model while institutional quality will moderate tourism.

Literature Review and Hypotheses are in section 2, Data is in section 3, Methodology is in section 4, Results are in section 5, Policy Implications are in section 6, while Conclusion is in section 7.

2. Literature Review & Hypothesis Development

2.1.Financial Stability

A financial system's capacity to endure disruptions and carry out its intended function is known as its financial stability. Without any disturbances that could endanger the economy as a whole, a stable financial system can mobilize funds and distribute resources, make payments, manage risks, and provide credit. Financial stability, according to Schinasi (2004), is the ability of the financial system to support economic performance and act as a buffer against financial shocks without causing financial stress. The concept extends beyond the well-being of specific banks. Financial stability also depends on the interactions between financial institutions, financial markets, borrowers, households, businesses, and public agencies, even though banks are the primary participants in the financial intermediation process in many developing economies.

Fragilities in the financial system that spread through interconnected balance sheets or confidence could lead to instability. During the global financial crisis of 2007–2009, financial stability garnered a lot of attention in academic and policy circles. The crisis demonstrated that systems might be unhealthy at the system level yet healthy at the institutional level. Excessive leverage, declining asset quality, liquidity, linked exposures, and credit expansion can all contribute to systemic stress. As a result, macroprudential policy now addresses the economy's financial

stability rather than just the oversight of specific financial institutions. One of the key characteristics of a good financial system is adequate capitalization.

A bank with sufficient capital will be better able to endure unanticipated losses without going out of business. Therefore, capital adequacy is a crucial defense against financial crises. The second component is asset quality, since a bank's profitability and capital position may be impacted if the quality of its loans declines. When there are more impaired assets, non-performing loans are more significant since they may restrict banks' ability to extend fresh credit. Liquidity is another crucial factor. Even if an organization is solvent, it may face significant issues if it struggles to fulfilll short-term commitments. The danger of hardship due to liquidity issues can be reduced with solid funding arrangements and adequate liquid resources. Profitability is also crucial since a string of losses can gradually weaken capital positions and reduce a financial institution's ability to resist shocks. Financial soundness indicators are commonly used in empirical research to describe these qualities. Aspects of financial-sector resilience, including capital adequacy, asset quality, earnings and profitability, liquidity, and others, are measured by the IMF's Financial Soundness Indicators methodology. Since financial stability is broader than any one ratio, this multifaceted approach is preferable to utilizing just one accounting ratio. Financial stability is negatively impacted by the degree of financial development. A more sophisticated financial system can improve access to financing and risk sharing, but it can also lead to vulnerabilities. One noteworthy example comes from Widjayanti et al. (2025), who discover that a major factor contributing to financial crises is extended periods of fast credit growth. This is particularly important when thinking about financial inclusion as a distinct policy domain since the addition of additional clients to the financial system may result in an increase in lending volume and a shift in the risk profile of financial institutions. Thus, the literature distinguishes between unsustainable financial expansion and beneficial financial deepening. Through efficient intermediation channels, savings are directed toward investments and stimulate economic activity. Conversely, unguided lending can increase repayment risks, asset-price pressures, and leverage.

2.2.Digitalization

The digitalization of finance has been one of the most intensely researched topics in the financial stability literature and there are significant differences in views regarding its potential impact on the stability of the financial system. The early research has focused on fintech as an efficiency

story. Philippon (2016) and Vives (2019) state that the new technologies reduce the costs of intermediary activity, increase the availability of credit and payment facilities and enhance the competition between established firms, thus diversifying sources of financing and lending and decreasing the risk of concentration resulting from a few large banks operating in the market. However, Thakor (2020) and Boot et al. (2021) have refined this approach by demonstrating that the positive effect is conditional as the technological innovations transform the process of information production and usage but do not eliminate frictions in maturity transformation, adverse selection and moral hazard.

The second theme deals with the dangers of instability. Buchak et al. (2018) highlight that fintech lenders and shadow banks have developed in part due to regulatory arbitrage, meaning that an increased proportion of credit intermediation activities takes place outside the realm of prudential supervision, whereas the Financial Stability Board (2017) and Claessens et al. (2018) argue that rapidly expanding digital credit markets may be based on unproven risk models, procyclical loan origination practices and unstable funding sources in comparison to traditional bank deposits. The involvement of BigTech companies opens up yet another issue: Frost et al. (2019) demonstrate that the inherent network and informational advantages possessed by such companies allow for a very fast growth and concentration process to take place, posing new "too big to fail" and "too connected to fail" concerns, among others.

New channels of transmission are also identified in the literature, including cyber risk, algorithmic herding, and fast runs made possible by digitization. Indeed, the fast runs possible by means of social media and mobile banking were evidenced when Silicon Valley Bank went bankrupt in 2023. The latest analysis of cyber risk provided by the IMF stresses that an attack on a major service provider would spread across multiple connected institutions regardless of solvency problems. Thus, the findings suggest that while digitization in itself does not necessarily stabilize or destabilize financial stability, it affects financial stability in one way or another, depending on the quality of regulation, the extent of supervision over non-bank and technology providers, operational resilience rules, and the ability of regulators to employ their own data-driven tools (suptech/regtech). Thus, there is a trend to develop activity-based regulation, better data governance, and international cooperation because in an age of digitalization, financial stability calls for regulatory practices to evolve just as rapidly as technologies.

As a whole, the literature highlights the conditional nature of the connection. While digitalization can help improve efficiency and informational aspects, such technology has its own start-up expenses and security concerns that have greater significance in young systems.

2.3.Tourism Receipt

A substantial portion of global services trade, tourism provides emerging nations with an alternative source of foreign exchange (Sadekin, 2025). Travel, lodging, food, entertainment/recreation, and other tourism-related expenses in the countries they visit are the sources of international tourism receipts. Unlike typical item exports, tourism involves the transportation of customers to the target nation, and the expenses incurred are nevertheless considered a worldwide demand for domestic services (Kocak et al., 2026). There is more to tourism's economic worth than just the money received directly from visitors. Spending on tourism has direct, indirect, and induced consequences.

Businesses that serve tourists, such as hotels, restaurants, and travel agencies, are directly impacted. Induced effects happen when visitors' money is spent on other domestic goods, services, and products by the employees and owners of these enterprises, while indirect impacts happen along their supply chains. Thus, tourism-related income can support business development, infrastructure investment, job creation, tax revenue growth, and foreign exchange earnings. The tourism-led growth hypothesis was articulated by Sarpong et al. (2020), who asserted that international tourism can be a business activity that can generate exports and contribute to long-term economic growth. In the context of developing economies, the foreign exchange component is important.

In many developing nations, structural issues related to foreign currencies and external financing are prevalent. There is a difference between exporting tangible goods and using tourism as a source of foreign exchange (Lin et al., 2020). Exporting tangible commodities as a source of foreign exchange is not the same as tourism. A nation's capacity to import, settle its foreign debts, and make investments can all be strengthened by a bigger foreign-currency revenue. Revenues from tourism can also have a financial impact on households and businesses. Hotels, restaurants, travel and tour companies, etc., may experience an increase in cash flow during a period of increasing foreign arrivals. Increases in business revenue can bolster the ability to service debt and increase demand for working-capital and investment loans. Thus, the banking industry may operate as a sort of

intermediary between tourism and the overall economy. Businesses in the tourism industry can use formal payment systems for transactions, borrow money to expand their capacity, and retain their earnings in financial institutions. Employee use of savings and payment services will increase along with the number of jobs in the tourism industry. There are sometimes risks associated with the relationship. The desire for international travel is a threat to tourism economies. However, abrupt drops in tourism might result from political unrest, natural disasters, health issues, economic crises, or geopolitical events in the source markets. This susceptibility was brought home by the COVID-19 pandemic. The financial consequences have received less attention than the impact of tourism dependence on economic growth. In order to address this issue, Saif-Alyousfi & Saha (2021) looked at 17,077 banks from 85 tourism economies between 1995 and 2016. The results of their two-step System GMM analysis show that foreign tourism receipts had a negative impact on bank profitability, with developing and low-income economies being most affected. This is important for the current analysis because profitability—which is not the same as financial stability—is strongly correlated with the banks' capacity to retain capital and absorb losses. It demonstrates that the financial flows related to tourism may affect financial institutions more than the "tourism-led-growth" narrative implies.

The same study clarifies the liquidity channel, which is another way that tourism receipts might impact lending activity by adding to domestic banks' deposit bases. As a result, tourism may have an impact on the financial industry through financial intermediation and revenue generation. The impact of tourism resources on long-term financial and economic gains may be influenced by the institutional framework. Infrastructure development, investment transparency, contract enforcement, and tourism-related business regulation can all be aided by good governance. Conversely, weak institutions may result in less-than-ideal resource allocation and hinder the development of tourism (Puah et al., 2018).

2.4.Institutional Quality

According to Z. Sun et al. (2025), the efficacy and legitimacy of formal and informal institutions that govern social and economic interactions are related to the quality of institutions. North (1990) asserts that institutions are the processes that, by establishing the conditions under which economic agents operate, mould their incentives and reduce uncertainty. These characteristics are particularly important in financial markets because contracts are frequently involved in numerous

transactions, payments are made after the fact, information is not always comprehensive, and future uncertainty is always a possibility. There are various ways to define the institutional context. The degree to which individuals or businesses trust the rule of law and the observance of contracts is what determines the rule of law (Mawardi et al.)

The ability of authorities to create and implement appropriate policies and regulations is linked to the quality of regulations. Government effectiveness is a gauge of how well policies are implemented and public services are provided. The degree to which public authority is not exploited for personal gain is a key component of corruption control. Political stability, voice, and accountability are other aspects of the governance environment. Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption are the six components of the Worldwide Governance Indicators ("Worldwide Governance Indicators," 2014). Because the WGI is a multidimensional indicator, it is especially well suited for creating an overall institutional quality indicator (Kaufmann & Kraay, 2025). There are several ways that institutions might affect the financial system. First, the binding authority of financial contracts is strengthened by excellent law (Garad et al., 2025). Lenders are more inclined to provide financing when they are certain that contractual obligations can be upheld. Second, in order to reduce excessive risks, the regulatory institutions have prudential standards. Third, improved financial policy execution and crisis management can be facilitated by effective public administration. A noteworthy aspect of corruption is its potential to distort the distribution of resources. Money may be invested in unproductive ways due to political influence or unofficial payments in financing decisions.

Systemic vulnerability and asset quality may decline as a result (Standaert et al., 2025). Institutional quality has an impact on confidence as well. When household depositors believe that their money is secure, that regulations are upheld, and that financial providers are positioned inside a legitimate legal framework, they are more likely to adhere to regulations and place savings in formal institutions. This implies that access to and utilisation of financing may be restricted by institutional vulnerabilities. Empirical research supports the aforementioned claim. Zeqiraj et al. (2022) found that in 73 developing nations, institutional quality contributes to the expansion of formal financial services availability and access. This analysis, which takes into account all six WGI aspects, shows that participation in the financial sector is influenced by governance circumstances. The understanding of the repercussions increases when the research shifts its focus from examining institutions

as simple causes of financial development to whether governance affects the results of financial-sector expansion. Because the research has begun to investigate whether governance alters the effects of financial-sector expansion rather than only viewing institutions as the direct causes of financial development, the knowledge of the repercussions becomes more nuanced. In a similar vein, Nguyen & Du (2022) found that nations with better institutional quality have a stronger positive association between financial inclusion and bank stability. This is particularly relevant since it suggests that financial resilience or additional financial risks may be impacted by the quality of financial participation at the institutional level. Without sacrificing proper lending standards, a financial institution under good supervision might be able to grow its clientele. The quality of institutions, as defined, relates to the effectiveness and credibility of formal and informal institutions that regulate economic and social interactions (Sun et al., 2025). According to North (1990), institutions are the mechanisms that shape the incentives and decrease the uncertainty for economic agents by setting the rules under which they function. In financial markets, these features are especially relevant since contracts are often involved in many transactions, payments are made later, the information is not always complete, and there is always a risk of future uncertainty. The institutional environment can be specified in several aspects. The rule of law is about how much confidence people or companies place in the rule of law and in contracts being respected (Mawardi et al., 2024).

There are several complementary theoretical frameworks that can explain the linkages between digitalization, tourism receipts, institutional quality and financial stability. None of these theories completely explain the relationship between these variables, as financial stability is influenced by economic institutions' risk management abilities, governance arrangements, external income flows, and financial intermediation. In light of this, the information asymmetry theory (Akerlof, 1970), financial intermediation theory (Hester, 1994) and financial instability theory (Minsky, 1960) tourism-led growth theory (Wu et al., 2025), and institutional theory (DiMaggio & Powell, 1983) are utilized in this study.

2.5.Hypothesis Development

On the basis of Literature and theories above the hypothesis developed are:

H1: Digitalization have a significant positive effect on financial stability in developing countries.

H2: Tourism receipts have a significant positive effect on financial stability in developing countries.

H3: Institutional quality significantly moderates the relationship between tourism receipts and financial stability.

3. Methodology

3.1.Sample of the study

The study concentrates on developing economies as they have a higher level of heterogeneity in terms of digitalization, tourism dependence, institutional development and stability. About 40 developing countries are used in a target sample.

3.2.Operationalization of Variables

Table 3.1. Measurement and Operationalization of Variables

Variable	Symbol	Measurement	Expected Effect
Financial Stability	FS	Composite index based on financial soundness dimensions	Dependent
Digitalization	DT	Composite index of Internet Usage, Mobile connectivity and secure internet servers	+
Tourism Receipts	TR	International tourism receipts relative to GDP	+
Institutional Quality	IQ	Composite index of six WGI governance dimensions	Moderator
GDP per capita	GDPPC	Log of real GDP per capita	Control
Inflation	INF	Annual percentage change in consumer prices	Control

The Z-score is measured by using the formula:

$$Z_{i,t} = \frac{ROA_{i,t} + {}^{E}/_{A_{i,t}}}{\Theta(ROA)_{i,t}}$$

The digitalization is measured by using the formula:

$$DT_{i,t} = 100 * \frac{S_{i,t} - min(S)}{max(S) - min(S)}$$

3.3.Model Specification

$$FinancialStability_{i,t} = \alpha + \beta_1 Digitalization_{i,t} + \beta_2 Tourism_{i,t} + \beta_3 Tourism * InstutuionalQuality_{i,t} + \sum_{j=1}^{9} \beta\, ControlVariables_{i,t} + \lambda_t + \varepsilon_{i,t}$$

4. Analysis

4.1.Descriptive Statistics

Descriptive statistics provide an overview of the data used in this study by emphasizing the important features of the variables. They highlight the mean, standard deviation, minimum, and maximum values of the dataset, which help to comprehend its distribution and variability. The full table of descriptive statistics for this study is provided below.

The table below displays the descriptive statistics for each variable.

Table 4.1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min.	Median	Max.
FS_t (Z-score)	840	18.367	3.157	11.700	18.285	25.300
FS_t (NPL)	840	7.643	2.029	3.470	7.665	13.190
FS_t (Capital)	840	16.749	1.258	13.910	16.760	19.780
DT_t	840	21	1.5	12.1	24.5	35
$Tour_t$	840	9.425	1.002	5.970	9.453	11.732
IQ_t	840	-0.000	2.396	-2.008	-1.212	6.349
GDP_Growth_t	840	4.700	1.874	-2.480	4.810	10.250
$Inflation_t$	840	7.078	12.883	0.750	4.670	157.220

4.2.Correlation Matrix

For investigating initial relationships between the variables, the Pearson correlation matrix is provided in Table 4.2 below. The correlation matrix provides an idea about the direction and strength of the bivariate relationships between financial stability and each of the independent variables and helps find initial evidence on how the variables should be related. Moreover, the correlation matrix helps to identify whether there is any multicollinearity problem. If correlation coefficients of the independent variables exceed 0.80, it will be considered as an indication of multicollinearity. These results will be supplemented with the information provided by the VIF value in the regression analysis.

Table 4.2. Pearson Correlation Matrix

Variable	FS_t	DT_t	$Tour_t$	IQ_t	GDP_Growth_t	$Inflation$
FS_t	1.000					
DT_t	0.031*	1.000*				
$Tour_t$	-0.006*	0.011*	1.000			
IQ_t	0.123	0.001*	0.463*	1.000		

GDP_Growth_t	-0.001*	0.218	0.126*	1.000		
$Inflation_t$	-0.193	0.021	-0.068*	-0.014	1.000	

Note: Table 4.2 shows the correlation matrix for the major variables; *, **, and *** also indicate significance levels of 10%, 5%, and 1%.

This observation is consistent with other studies showing that correlation values below 0.80 are not usually indicative of serious multicollinearity problems (Hair et al., 2019).

4.3.Pooled OLS Regression

To test the hypotheses with control for other influences, the regression analysis was performed with financial stability as the dependent variable. The predictors include digitalization and tourism, whereas the control variables included in the model are Inflation and GDP growth. The moderator of the study is institutional quality. The regression results including the coefficient estimates, standard errors, level of significance, and measures of goodness of fit (R^2, adjusted R^2, and F-statistic) are presented in Table 3. Heteroscedasticity, multicollinearity, and tests were done to ensure that the model assumptions are fulfilled, and robust standard errors were computed where appropriate.

The table below show the results of pooled OLS regression for all the three measures of financial stability is given below:

Table 4.3. Pooled OLS Regression Analysis

Variables	$FS_(Z-Score)_t$	$FS(Capital)_t$	$FS(NPL)_t$
DT_t	0.025*	0.051**	0.011*
	(1.05)	(2.16)	(1.87)

$TOUR_t$	0.075* (1.45)	0.17** (5.76)	0.023*** (11.75)
IQ_t	0.089* (1.06)	0.110* (1.458)	0.332* (4.32)
GDP_Growth_t	0.001* (1.05)	0.003 (0.007)	0.323** (9.75)
$Inflation_t$	0.021 (0.045)	0.0015 (0.0015)	-0.040 (-0.85)
$IQ_t * TOUR_t$	2.054* (1.87)	1.57 (2.54)	0.46 (15.47)
Constant	0.301* (2.39)	0.043** (3.061)	-0.631* (-1.291)
Year fixed effects	yes	yes	yes
R^2	0.88	0.93	0.82
$Adjusted\ R^2$	0.84	0.92	0.81
Obs.	840	840	840

5. Conclusion

The current study explored the impact of digitalization and tourism on financial stability and the moderating role of institutional quality on the tourism impact. The measurement of digitalization is done through PCA, which uses internet use, mobile connectivity, and secure internet servers to build the index. Financial stability is evaluated using the bank Z-score, the non-performing loan ratio, and the capital ratio. From the findings, it was revealed that digitalization impacts positively and significantly on financial stability and thus confirms hypothesis H1. Tourism positively

impacts on financial stability as well and hence confirms H2. But the interaction of tourism and institutional quality is not statistically significant.

The findings supported the claims that tourism should be viewed as a component of the larger macro-financial policy debate rather than as a sectoral development issue. However, the study was unable to statistically verify that the institution's quality had a substantial impact on the relationship between tourism receipts and the institution's financial stability. This was important because it showed that not all economic channels were equally correlated with institutional quality.

5.1.Limitations of the study

Indices at country level are not able to distinguish the adoption of digitization by banks from country connectivity, and the presence of secure servers serves as a proxy for infrastructure and not for digital technology usage by banks. Additionally, different forms of tourism, tourism markets, tourism-related investments, domestic and international tourism, and the distribution of tourism revenue across economic sectors were all not taken into account by this measure. The relationship between tourism activity and financial stability may have been affected by these disparities.

Lastly, the study is limited due to the use of country-level aggregate data as well as a limited sample size in terms of the number of years and countries, and hence it might mask any heterogeneity in various regions, types of banks, and income segments. Variation in regulation, supervision, market structure of the banking sector, and level of financial development may also influence the impact of tourism and digitization on financial stability. These factors cannot necessarily be controlled in the regressions due to lack of data. While the econometric methodology was carefully selected to minimize endogeneity and omitted variable problems, it should be kept in mind that the results can only be interpreted as an association rather than causation.

5.2.Future Recommendation

It is recommended that future studies look at the relationship between tourism and outside shocks (Pham et al., 2021; Salinero et al., 2025). Global pandemics, exchange rate crises, commodity price shocks, international travel restrictions, geopolitical changes, and the global financial crisis can all have a substantial impact on tourism revenues and macro financial conditions. Therefore,

further research examining the nature of the relationship between tourism and financial stability before and after economic or geopolitical crises might benefit from a regime-switching, structural-break, event-study, or interaction-based methodology.

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