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Relationships between Inbound Tourism, Financial Development, and Economic Growth: An Empirical Study of Fujian Province, China

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Abstract

This paper mainly studies the relationship between financial development, inbound tourism development, and economic growth rate in Fujian Province, China. This study uses the data of real GDP, foreign exchange income from international tourism, and financial interrelations ratio from 1994 to 2019. In the analysis process, the Johansen cointegration test is first used to analyze whether the three have a long-term equilibrium relationship. Then the vector error correction model is established to test the restrictive relationship among the three. Next, the Granger causality test assesses whether the three have a causal relationship. Finally, the contribution rate of the three is analyzed by variance decomposition. The above methods show the following conclusions: first, the three have a long-term equilibrium relationship. Secondly, in the short term, local economic growth is constrained by inbound tourism and financial development. Thirdly, there is a causal relationship between economic growth and inbound tourism in Fujian, while there is a unidirectional causal relationship between financial development and economic growth, financial development, and inbound tourism. Fourthly, the contribution rate of inbound tourism to economic growth fluctuations in Fujian is higher than that of financial development.

Keywords: Inbound Tourism, Johansen Test, Financial Development, Granger Causality Test, Economic Growth

JEL Classification Code: C87, C32, O47, Z23

1. Introduction

Over the past few decades, many scholars have researched the relationship between economic growth and tourism revenue in various countries. As tourism grows in many countries, the causal relationship between economic growth and tourism revenue is becoming increasingly important for policymakers. Some scholars have demonstrated that tourism positively and significantly impacts real gross domestic product (GDP) growth. For example, some scholars have provided evidence for a one-way causal relationship between tourism and economic growth in Brazil, Mexico,

and the Philippines. In contrast, the opposite has been found in China, India, Indonesia, Malaysia, and Peru. No causality has been found in 7 of the 16 emerging market countries, and finally, a two-way causal relationship has been found in Chile (Sokhanvar et al., 2018). In addition, tourism generally supports the overall economy's growth in Iran. The average contribution of tourism to economic growth by Iranian provinces shows that the highest contribution to economic growth is Khorashan, followed by Gilan. Third is Adabir, with a contribution rate of more than 1%, and 28 provinces, although less than 1%, still have a positive contribution (Habibi et al., 2018). Some scholars have studied the causal relationship between actual international tourism revenue and economic growth in 11 Asian regions, considering interregional dependence and heterogeneity. The results support evidence of the growth hypotheses in regions such as Cambodia, China, and Malaysia. In places like Hong Kong, Indonesia, the Philippines, and South Korea, opposing relationships support evidence for the conservation hypothesis. Mutual causality has been found in Macau and Singapore (Wu & Wu, 2019). Tourism contributes more to the economic output of the Caribbean than any other region in the world, and every 10% increase in tourism expenditure

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increases the economic growth rate from 0.3% to 1% (Cannonier & Burke, 2019).

In this process, many scholars have also studied the relationship between tourism and financial development and have obtained many research results. For example, tourism expenditure by Caribbean countries is the most significant single foreign exchange inflow and is associated with large international capital flows. It is found that tourism expenditure has a significant positive impact on various indicators of financial development. These findings have important policy implications for promoting growth and development by improving the efficiency of the financial development system (Cannonier & Burke, 2017). In Zhangjiajie, China, tourism has become a new growth engine closely aligned with the financial industry, contributing to the sustainable development of the local economy (Liao et al., 2018). Turkey is a top tourist destination and has developed a well-functioning financial system over the past decade. Tourism development in Turkey has a long-term and intensified interaction with financial development. Because the financial market mainly influences the expansion of tourism in Turkey, and changes in tourist traffic in Turkey precede changes in financial volumes (Katircioglu et al., 2018).

With the continuous development of China's economy, China's financial industry and tourism industry are also developing in-depth along with economic growth, while China's tourism industry and financial industry in Fujian Province are also in rapid development. Fujian's financial integration process has been continuously improved, and the overall development trend of Fujian's tourism industry is vigorous.

In recent years, China's development policy has proposed vigorously promoting the development of the tourism industry, indicating that the tourism industry under the new normal is of great significance to China's economic and social development. In addition, as China's gross domestic product continues to rise, residents' income continues to increase. And people's view of consumption begins to change from the simple pursuit of food, clothing, and warmth to the concept of pursuing a higher level of material life and spiritual well-being. Contemporary people view travel and tourism as a pleasant form of recreation and a means of raising their standard of living. Therefore, Fujian's inbound tourism industry has great development potential in the whole market. It should use local characteristic tourism resources and promote Fujian Province's inbound tourism industry in a new direction.

In 2019, the total number of foreign and domestic tourists in Fujian reached 9,582,800, an increase of 6.33% compared with the number of domestic and foreign overnight tourists in 2018. The total domestic and foreign overnight

inbound spending reached 762.749 billion yuan, an increase of 22.63% compared to last year. Among them, the total domestic overnight expenditure reached 739.3 billion yuan, an increase of 22.54% compared to the previous year. From the above data, we can see that the development of Fujian's tourism industry is playing an essential role in China's economic development. At the same time, the development of its tourism industry is contributing more and more to economic growth.

The economy's core is finance because financial development has a self-evident impact on economic growth and plays a vital role in promoting the development of inbound tourism. The relationship between the inbound tourism industry and the financial industry in Fujian Province is inseparable. In addition, the rapid growth of the inbound tourism industry needs the full support of the financial industry. Given the size and scope expansion of the finance industry and inbound tourism business, in-depth research on the relationship and function of inbound tourism, financial development, and economic growth benefits the nation and the region in Fujian Province. It provides guidance and policy support for developing the inbound tourism market to promote the industry's sustainable development.

The rest of this article is structured as follows: The second part provides a literature review and points out the contribution of this study. The third part introduces the empirical analysis data and gives the test results. The fourth part provides some concluding remarks and suggestions.

2. Literature Review

2.1. The Relationship Between Tourism and Economic Growth

The earliest research on the relationship between the tourism industry and economic growth began in foreign tourism academia, and the method was traditional econometrics. So far, many experts and scholars have conducted detailed statistical analyses on the interrelationship between economic growth and the inbound tourism industry at the regional and national levels. Balaguer and Cantavella-Jordá (2002) confirmed the tourism-led growth hypothesis by testing cointegration and causality. And it turns out that Spain's economic growth has been linked to tourism for at least the last three decades. Oh (2005) studied the causal relationship between tourism and Korean economic growth using Engle and Granger's two-stage method and the bivariate autoregressive model. The results of the cointegration test showed that there is no long-term equilibrium relationship between the two sequences. In addition, the results of the Granger causality test mean that the economy drives tourism growth in a one-way causal relationship. The hypothesis

that tourism leads to economic growth does not hold in the Korean economy.

Then, using panel data for 42 African countries from 1995 to 2004, Fayissa et al. (2008) explored the potential contribution of tourism to economic growth and development within a traditional neoclassical framework. The results showed that income from tourism, like investment in physical and human capital, contributes significantly to the current gross domestic product and economic growth in sub-Saharan Africa. Jin (2011) selected five variables for analysis: real output, real capital, labor force, openness, and tourism, and the results showed that the short-term impact of tourism on Hong Kong's economic growth was positive. However, the analysis cannot confirm the long-term impact of tourism on economic growth. Mishra and Rout (2011) used the popular time-series models spanning 1978 to 2009, providing evidence of long-term unidirectional causality from tourism activity to national economic growth. Nissan et al. (2011) identified the main variables influencing tourism activities and showed feedback effects between income and tourism. The results showed that tourism provides the necessary funds for enterprises' activities, stimulates local enterprises' productivity, creates new jobs, and increases the country's welfare.

Furthermore, Çağlayan and Şak (2012) used the Granger causality test to study the causal relationship between tourism revenue and gross domestic product (GDP). The results showed a two-way causal relationship between tourism revenue and European GDP. A one-way causal relationship existed between GDP and tourism revenue in the United States, Latin America, the Caribbean, and worldwide. Tourism revenue in East Asia, South Asia, and Oceania has an inverse causal relationship with GDP. No causal relationships are found in Asia, the Middle East, North Africa, Central Asia, and sub-Saharan Africa. Suresh and Senthilnathan (2014) used the Granger causality test to study the causal relationship between economic growth and tourism revenue in Sri Lanka between 1977 and 2012. In addition, the long-term relationship between the two variables is analyzed by using the cointegration test and error correction mechanism. The results showed a one-way causal relationship between economic growth and tourism revenue, and economic growth only leads to increased tourism revenue. Fawaz et al. (2014) assessed whether tourism contributes to economic growth. The findings suggest that the relationship between international tourism and economic growth is consistent across all regions and categorized countries worldwide.

Recently, Antonakakis et al. (2015) used the newly introduced spillover index method to analyze the dynamic relationship between tourism growth and economic growth. The results show that the tourism-economic growth relationship is unstable in scale and direction, indicating that the tourism-led economic growth hypothesis (TLEG)

and the economy-driven tourism growth hypothesis (EDTG) are time-dependent. Haller et al. (2021) empirically tested whether economic integration occurred from three income types in the tourism sector, analyzing the situation in 28 member states from 2012 to 2018 and finding that the contribution of tourism income to economic growth is different in different countries.

2.2. The Relationship Between Tourism and Financial Development

The current situation of the tourism industry is in line with the general trend of today's world economic development. It shows a good development momentum, and most researchers have conducted further research on the contribution of tourism to financial development. Shahbaz et al. (2018) used the Granger causality test to study the causal relationship between tourism and financial development. The results showed that cointegration exists for all variables; Tourism development is positively correlated with financial development; Economic growth is positively correlated with financial development; Real exchange rates are negatively associated with financial development. There is a two-way causal relationship between tourism development and financial development and a one-way causal relationship between financial development and tourism development and economic growth. Al-Mulali et al. (2021) used the panel augmentation mean group method to control for other determinants of tourist arrival. The results showed that financial development has a positive impact on tourism development.

On the contrary, economic growth and national price levels have no significant effect on tourism development. Musakwa and Odhiambo (2022) used the Autoregressive Distribution Lag (ARDL) boundary test method and the Granger causality test to determine whether financial development will lead to tourism development in South Africa. The results showed a one-way causal relationship between tourism and financial development in the short and long term.

2.3. The Relationship Between Tourism, Financial Development, and Economic Growth

With the continuous development of international tourism, some scholars have expanded from studying a single field to multi-field research objects, forming a comprehensive research system. For example, Ohlan (2017) examined the relationship between tourism and economic growth in India. The results show that tourism, economic growth, and financial development are co-integrated. The study found that inbound tourism had long-term and short-term contributions to India's economic growth.

In addition, the analysis showed a long-term one-way Granger causal relationship between tourism and economic growth. Mustafa (2019) examined the contribution of foreign direct investment (FDI) and tourism revenue (TR) to the gross domestic product (GDP) of Sri Lanka. And the empirical study showed a significant positive relationship between the variables TR and FDI and GDP in the long run. The results of the Granger causality test indicated that the two-way causality contributed to the economic growth of Sri Lanka. Kumar and Paramanik (2020) used a Non-linear Autoregressive Distributed Lag (NARDL) bounds test to examine the relationship between financial development and economic growth. The results showed that, unlike the short run, long-run financial development positively impacts economic growth.

And further research found that the positive and negative components of financial development had a symmetric impact on the Indian economy. Rasool et al. (2021) used panel ARDL cointegration tests to study the relationship between inbound tourism, financial development, and economic growth in five countries (Brazil, Russia, India, China, and South Africa). The results showed that tourism, financial development, and economic growth are co-integrated in the long term. In addition, Granger's causality analysis showed that the causal relationship between inbound tourism and economic growth is bidirectional.

To sum up, in the past, most scholars have studied the relationship between tourism and economic development or the relationship between tourism and financial development, and only a small number of scholars have examined the relationship between tourism, financial development, and economic growth. As a result, there are few results in the analysis and research incorporating inbound tourism and financial development into the analysis and research on factors influencing economic growth. Because of the above problems, this paper will use the comprehensive analysis framework of econometric methods to deeply study the relationship between the development of inbound tourism, financial industries, and economic growth. This paper takes the financial development, inbound tourism, and economic growth of Fujian Province as the research objects to study the relationship between financial development, inbound tourism, and economic development of Fujian Province. And we will use the two most common economic analysis methods — the Granger causality test and the Johansen cointegration test, and reasonable suggestions are put forward. This study will have implications for policymakers in the economic development of Fujian Province.

3. Empirical Analysis and Results

3.1. Source of Data and Selection of Indicators

In this paper, international tourism foreign exchange earnings, financial interrelations ratio, and economic growth of Fujian Province from 1994–2019 are selected as the leading indicators from the indicator database of the official website of the *National Bureau of Statistics, Fujian Statistical Yearbook* and *China Financial Yearbook Statistics*, respectively. The specific explanation is as follows:

International foreign tourism exchange earnings indicate the development of inbound tourism in Fujian Province, which R expresses. Because the statistics of international tourism foreign exchange earnings are in millions of US dollars, the units of foreign exchange earnings are converted into RMB — a billion units through the exchange rate of RMB to US dollars from 1994 to 2019.

The financial interrelations ratio is used to indicate the financial development of Fujian Province, which is expressed by F . Its calculation formula is:

$$F = \frac{M_2}{\text{GDP}} \quad (1)$$

(M_2 is the sum of local and foreign currency deposits of financial institutions in Fujian Province and the balance of local and foreign currency loans of financial institutions in Fujian Province).

Economic growth is selected to indicate the level of economic development in Fujian Province. G expresses it. Since Fujian Province may be directly affected by factors such as domestic inflation. Therefore, the actual data from 1994 is chosen as the base year for the study.

3.2. Smoothness Test

Before performing the Johansen test on the series, it is necessary to perform a unit root test to see if the series is a smooth and single integer of the same order. In this paper, the Augmented Dickey-Fuller (ADF) test is used to perform a unit root test on the series of each variable. First, the logarithmic series of the three indicators of real GDP, financial interrelations ratio, and foreign exchange earnings from international tourism in Fujian province is taken and labeled as LNG, LNF, and LNR, respectively. Then, with the help of Eviews econometric software, the smoothness tests are performed on the LNG, LNF, and LNR series,

respectively. Table 1 shows that the variables are non-stationary at the 1% significance level, and the original hypothesis holds if the time series of each variable has a unit root. Therefore, in this paper, the first-order difference test is conducted on each variable, and the results show that their first-order difference variables are smooth. Then the original hypothesis of containing unit roots does not hold. The ADF test results show that LnG, LnF, and LnR are all first-order single integer series, i.e., the preconditions for the cointegration test relationship are satisfied.

The following are the final model equations:

- (1) LNG first-order difference series Model 2 equation:

$$\Delta \hat{LNG}_t = 0.055925 - 0.480075 \Delta LNG_{t-1} \quad (2)$$

- (2) LNF first-order differential series Model 3 equation:

$$\Delta \hat{LNF}_t = 0.034594 - 0.001112T - 0.850159 \Delta LNF_{t-1} \quad (3)$$

- (3) LNR first-order differential series Model 2 equation:

$$\Delta \hat{LNR}_t = 0.083372 - 1.153912 \Delta LNR_{t-1} \quad (4)$$

3.3. Johansen Cointegration Test

The VAR model is first needed to facilitate the selection of the correct lag order so that the lag order of the Johansen

test can be determined, and the final data obtained is shown in Table 2 below.

The comparison results in Table 2 conclude that its final optimal lag order is 2, which can effectively and accurately reflect the dynamic relationship among LNG, LNF, and LNR.

The lag order of the test model needs to be set in the cointegration test, and through the above analysis, VAR (2) is chosen as optimal for the LNG, LNF, and LNR series. Therefore, the lag order of the cointegration test model is set to 1; the test variables LNG, LNF, and LNR are set to have a deterministic trend; the cointegration equation is set to have an intercept but no deterministic trend.

The results of the cointegration test are shown in Table 3. The original hypothesis “None” means there is no cointegration relationship. The trace and maximum eigenvalue statistics are more significant than the corresponding 1% critical values under this hypothesis. The corresponding probability *p*-values are both less than 0.01, so the original hypothesis can be rejected. Therefore, the variables LnG, LnF, and LnR are considered to have at least one co-integration relationship. The hypothesis “At most 1” means that there is at most one co-integration relationship, and the value of the trace statistic and the maximum eigenvalue are smaller than the corresponding 1% critical value. The corresponding probability *p*-value is greater than 0.01, which means that the original hypothesis is accepted. Therefore the variables LnG, LnF, and LnR have at most one co-integration relationship. The original hypothesis “At most 2” means that there are at most two cointegration

Table 1: Results of the Stability Test Results

| Variables | <i>p</i> -statistics | ADF Statistics | 1% Threshold | 5% Threshold | 10% Threshold | Conclusion |
|-----------|----------------------|----------------|--------------|--------------|---------------|----------------|
| LnG | 1.0000 | 8.686622 | -2.660720 | -1.955020 | -1.609070 | Non-stationary |
| LNF | 0.9305 | 1.148151 | -2.660720 | -1.955020 | -1.609070 | Non-stationary |
| LNR | 0.9386 | 1.220308 | -2.660720 | -1.955020 | -1.609070 | Non-stationary |
| DLNG | 0.0023 | -4.366354 | -3.737853 | -2.991878 | -2.635542 | Smooth |
| DLNF | 0.0049 | -4.725811 | -4.394309 | -3.612199 | -3.243079 | Smooth |
| DLNR | 0.0002 | -5.430371 | -3.737853 | -2.991878 | -2.635542 | Smooth |

Table 2: Results of the Optimal Lag Order Selection for the VAR Model

| Lag | LogL | LR | FPE | AIC | SC | HQ |
|-----|----------|-----------|-----------|------------|------------|------------|
| 1 | 85.58552 | NA | 3.41e-07 | -6.382127 | -5.940357 | -6.264925 |
| 2 | 107.3143 | 32.59320* | 1.21e-07* | -7.442860* | -6.559320* | -7.208457* |

*Represents the lag order selected according to this criterion.

Table 3: Results of the Cointegration Test

| Hypothesized | Trace 0.01 | | | | Max-Eigen 0.01 | | | |
|--------------|--------------|-------------|-----------|----------------|----------------|-------------|-----------|----------------|
| | No. of CE(s) | Eigen value | Statistic | Critical Value | Prob.** | Eigen value | Statistic | Critical Value |
| None* | 0.701778 | 45.30386 | 35.45817 | 0.0004 | 0.701778 | 26.61819 | 25.86121 | 0.0076 |
| At most 1 | 0.437230 | 18.68567 | 19.93711 | 0.0159 | 0.437230 | 12.64746 | 18.52001 | 0.0886 |
| At most 2 | 0.240021 | 6.038210 | 6.634897 | 0.0140 | 0.240021 | 6.038210 | 6.634897 | 0.0140 |

Trace test indicates 1 cointegrating eqn(s) at the 0.01 level; *Represents the rejection of the original hypothesis of no cointegration relationship between variables at the 1% threshold level.

Table 4: Results of Granger's Causality Test

| Null Hypothesis | Obs | F-statistic | Prob. | Granger Causality |
|--------------------------------|-----|-------------|--------|-------------------|
| LNF does not Granger Cause LNG | 24 | 10.7666 | 0.0007 | Yes |
| LNG does not Granger Cause LNF | 24 | 0.71868 | 0.5002 | No |
| LNR does not Granger Cause LNG | 24 | 5.39507 | 0.0139 | Yes |
| LNG does not Granger Cause LNR | 24 | 4.00749 | 0.0353 | Yes |
| LNR does not Granger Cause LNF | 24 | 0.20733 | 0.8146 | No |
| LNF does not Granger Cause LNR | 24 | 4.50324 | 0.0251 | Yes |

relationships. The trace statistics and maximum eigenvalues under this hypothesis are less than the corresponding 1% critical value. The corresponding probability *p*-values are greater than 0.01, meaning the original hypothesis is accepted. The analytical results of the tests in Table 3 indicate that there is still a consistent long-run equilibrium fluctuation relationship between real GDP, financial correlation rate, and foreign exchange earnings from international tourism in Fujian.

The results of both the trace statistic test and the maximum eigenvalue statistic test in Johansen's test (see Table 3) show that LNG, LNF, and LNR have one cointegration relationship at the 1% significance level.

3.4. Construction of Vector Error Correction Model

VECM models of LNG, LNF and LNR can be obtained based on the cointegration test. The Johansen cointegration test shows that there is a cointegration relationship. The Johansen co-integration equation is established as follows:

$$\text{Coin Eq1} = -1.476444 + \text{LNG}_{t-1} + 1.740301\text{LNF}_{t-1} - 1.786156\text{LNR}_{t-1} \quad (5)$$

And the VECM regression results and their expressions are as follows.

$$\begin{aligned} \Delta Y_t = & \begin{bmatrix} -0.015205 \\ -0.066195 \\ 1.357612 \end{bmatrix} \text{Coint Eq1} \\ & + \begin{bmatrix} 0.780060 & 0.408089 & 0.003484 \\ 0.085053 & -0.054430 & 0.072801 \\ -0.795224 & -0.228824 & 1.474595 \end{bmatrix} \Delta Y_{t-1} \\ & + \begin{bmatrix} -0.037614 & 0.238427 & 0.156109 \\ -0.202280 & 0.027164 & -0.042131 \\ -0.791456 & -1.104671 & 0.501071 \end{bmatrix} \Delta Y_{t-2} \\ & + \begin{bmatrix} -0.006394 \\ 0.042406 \\ 0.159855 \end{bmatrix} \end{aligned} \quad (6)$$

There is only one covariance correction term, CointEp1, for the explanatory variables in the vector error modification model. Among the explained endogenous variables, there are usually two endogenous variables in the form of lags one and two of the first-order difference. Among them

$$\Delta Y = \begin{bmatrix} \text{D(LNG)} \\ \text{D(LNF)} \\ \text{D(LNR)} \end{bmatrix}, \text{ the error correction terms CointEq1}$$

and CointEq2 reflect the disequilibrium error of deviation from the long-term equilibrium relationship among the three variables, and the adjustment parameters in front of CointEq1 and CointEq2 indicate the speed of eliminating the disequilibrium error. When an adjustment parameter is positive, the deviation from the disequilibrium error will be difficult to correct and may get bigger. However, the deviation from the disequilibrium error will be easily corrected. From the VECM expression, it can be seen that CointEq1 corresponds to a D(LNG) coefficient of -0.015205 , indicating that economic growth in Fujian Province is constrained in the short run by inbound tourism and financial development.

3.5. Granger Causality Analysis

The lag order selected is 2 to conduct the Granger causality test to check whether there is a causal relationship between LNG, LNF, and LNR, whether the causal relationship between them is positive or negative, and the results obtained from the test are shown in Table 4. The results of the test are as follows:

- 1) At a given 5% significance level, the F -statistic corresponds to a Prob value of $0.0007 < 0.05$, so the original hypothesis is rejected, which means that LNF is the Granger cause of LNG.

At a given 5% significance level, the F -Statistic corresponds to a Prob value of $0.5002 > 0.05$, so the original hypothesis can be accepted, which means that LNG is not the Granger cause of LNF.

Therefore, the variable LNF has no predictive power for the variable LNG, while the variable LNG has predictive power for the variable LNF.

- 2) At a given 5% significance level, the F -statistic corresponds to a Prob value of $0.0139 < 0.05$, so the original hypothesis is rejected, which means that LNR is the Granger cause of LNG.

At a given 5% significance level, the F -statistic corresponds to a Prob value of $0.0353 < 0.05$, so the original hypothesis is rejected, which means that LNG is the Granger cause of LNR.

Therefore, the variable LNR has predictive power for the variable LNG, and the variable LNG has predictive power for the variable LNR.

- 3) At a given 5% significance level, the F -statistic corresponds to a Prob value of $0.8146 > 0.05$, so the original hypothesis can be accepted, which means that LNR is not the Granger cause of LNF.

At a given 5% significance level, the F -statistic corresponds to a Prob value of $0.0251 < 0.05$, so the original hypothesis is rejected, which means that LNF is the Granger cause of LNR.

Table 5: Results of Variance Decomposition (LNG)

| Period | SE. | LNG | LNF | LNR |
|--------|----------|----------|----------|----------|
| 1 | 0.034976 | 100.0000 | 0.000000 | 0.000000 |
| 2 | 0.062437 | 91.56242 | 6.052305 | 2.385275 |
| 3 | 0.089056 | 82.22662 | 14.55229 | 3.221085 |
| 4 | 0.116007 | 75.86303 | 22.23753 | 1.899439 |
| 5 | 0.143075 | 71.97981 | 26.30611 | 1.714081 |
| 6 | 0.167166 | 70.00757 | 28.59855 | 1.393881 |
| 7 | 0.188448 | 68.02697 | 30.87584 | 1.097198 |
| 8 | 0.208622 | 65.73657 | 33.35525 | 0.908172 |
| 9 | 0.228457 | 63.67291 | 35.38370 | 0.943393 |
| 10 | 0.247161 | 62.17207 | 36.81702 | 1.010911 |

Therefore, the variable LNR has no predictive power for the variable LNF, while the variable LNF has predictive power for the variable LNR.

3.6. Analysis of Variance Decomposition

Variance decomposition is to understand the relative importance of each variable's impact on the model's endogenous variables by analyzing its effects' contribution rate and other variables' impact. Its selected prediction lag is 10, which mainly examines the degree of influence on inbound tourism, financial development, and economic growth in Fujian, and the results are shown in Table 5.

The increasing number of lag periods led to a decline in the variance of the economic growth forecast of Fujian Province, but the proportion was still large. By the 10th period, about 62.17% of the forecast variance came from Fujian Province. The contribution rates of financial development and inbound tourism to Fujian's economic growth fluctuated, reaching 36.82% and 1.01%, respectively, in the 10th period. To sum up, the contribution rate of financial development to the economic growth fluctuation of Fujian Province is higher than that of inbound tourism.

4. Conclusion and Recommendations

4.1. Conclusion

This paper uses a cointegration test to analyze financial development empirically. The results confirm a long-run equilibrium relationship between real GDP, financial interrelations ratio, and foreign exchange earnings from international tourism in Fujian from 1994 to 2019. The Granger causality test confirms that there is a one-way causal relationship between the real GDP of Fujian Province and the financial interrelations ratio. The results prove that

the financial development of Fujian has a positive promoting effect on economic growth. In contrast, the economic growth of Fujian is not an inevitable factor affecting financial development, which indicates that the economic growth of Fujian has not extensively promoted local financial development. Therefore, it is essential to clarify further the correlation and boundaries between government oversight of policies and economic market forces so that the importance of financial market mechanisms can be established and given full play in financial development. In addition, the Granger causality test confirms a two-way causal relationship between international tourism foreign exchange earnings and the real GDP of Fujian Province. It indicates inbound tourism can grow continuously with the support of local economic growth, and inbound tourism is also an inevitable factor affecting economic growth.

Moreover, the Granger causality test also confirms a one-way causal relationship between international tourism foreign exchange income and financial interrelations ratio, which can be explained by the fact that financial development can promote the development of inbound tourism. In contrast, the development of inbound tourism is not an inevitable factor affecting financial development. Finally, the results of ANOVA show that Fujian's economic growth is most influenced by itself apart from them. The contribution rate decreases significantly over time, while Fujian's financial development has the second-highest impact. However, the contribution rate changes over time and still shows an increasing trend. In other words, the financial development of Fujian contributes more to economic growth than the development of inbound tourism.

From the above findings, it can be seen that there is an inseparable relationship between inbound tourism, financial development, and economic growth in Fujian Province. Developing inbound tourism and finance in Fujian Province can promote sustained economic growth and industrial development in other fields, leading to economic growth by leaps and bounds. There are many advantages to economic growth. For example, it has a role in promoting inbound tourism and financial development. But the results are not uniform, as economic growth has been refined to Fujian's geographical location and urban-rural structure, and significant imbalances exist. Therefore, the analysis of the factors affecting the foreign exchange earnings and financial interrelations ratio of international tourism is very complex, and it is for these reasons that the following recommendations are made.

4.2. Recommendations

4.2.1. Promotion of Tourism in Fujian

First, develop Fujian's unique tourism resources and improve the visibility of regional tourism projects to attract

more foreign tourists. The income created by tourism is one of the essential sources of the local economy, and tourism resources are the fundamental guarantee of tourism development. The popularity of local tourist attractions directly affects foreign tourists' willingness to travel. Therefore, creating tourism projects with local characteristics is the main way to attract foreign tourists. In addition, to meet the needs of different tourists, tourism projects with local characteristics can be combined with local culture to design scientific special tourism projects. And by strengthening the region's advantages in terms of transportation, food, accommodation, and other aspects of the embodiment, the vital tourism industry chain is extended to fully demonstrate the characteristics of the local economy and give tourists more different tourism experiences.

Second, strengthen the innovative development strategy about the combination of online and offline in tourism. In the era of high-speed Internet development, people can obtain more tourism information and learn more about tourist attractions with local characteristics through the Internet, so make full use of the dividends brought by the Internet to the industry and promote the development of new models of smart tourism. And use intelligent software to dig valuable innovative tourism information tailored for foreign tourists. Specific measures mainly include local tourism promotion departments using various APP intelligent software such as WeChat Public, Tik Tok, and Kwai to promote tourist attractions with local characteristics. And provide a variety of private tailored travel information services for foreign tourists, thus enhancing the willingness of more foreign tourists to travel to the region.

Furthermore, improve the quality of service in terms of local characteristics of tourism. Whether tourists can have a good experience in tourism depends on whether the local characteristics of tourism can provide good services. With the continuous improvement of people's living standards, people pay more attention to spiritual satisfaction after satisfying their food, clothing, housing, and transportation needs. People also have higher requirements for tourism services, so they pay more attention to intimate and comfortable tourism services. Therefore, to bring tourists a good travel experience, it needs to fully meet the needs of tourists' hearts, presenting high-quality services, which is a meaningful way to cultivate tourists to become repeat customers. Local tourism service personnel need to improve their quality and focus on improving their service quality to create a good tourist experience for tourists.

Finally, it can be seen from the above analysis that foreign exchange earnings from international tourism play an important role in contributing to rapid economic growth. Talents are the main force of industry development. Therefore, we should pay attention to cultivating talent in tourism and strengthening talent teams' construction.

Professional talents are an essential guarantee for the development of the tourism economy. Introducing highly educated and high-level management talents is the primary path to developing tourism with local characteristics. At the same time, colleges and universities are the main places for cultivating talent. They should give full play to their unique functions, open more tourism-related majors and courses, optimize the existing courses and talent training programs, and cultivate more professional talents for developing tourism with local characteristics. In addition, improve the mechanism of talent cultivation, optimize the allocation of talent resources, and establish appropriate incentive mechanisms and talent promotion channels so that the scale of the talent team can grow and better serve the development of local specialty tourism.

4.2.2. Improving Financial Development

First, innovate the financial supervision mode, establish a whole process and dynamic supervision system, and improve the quality of financial development. The development of the financial sector can largely promote the development of the regional economy. However, various types of financial risk prevention and control is an important guarantee for the healthy development of the financial sector. Officials need to manage stable macroeconomic policies and facilitate improvements in financial development (Bui, 2020). Therefore, local governments must innovate the financial supervision model, establish a sound financial supervision mechanism, actively rectify the disorder in the financial market, promote the healthy and stable development of the financial sector, and guarantee the sustainable development of the regional economy.

Secondly, make use of the economic growth effect brought by the two-way opening of finance to integrate the financial market of Fujian Province and foreign financial markets and promote each other to promote the rapid and lasting development of the financial market of Fujian Province. The two-way opening of the financial market enables the capital market of Fujian Province to quickly learn from the mature experience of the development of foreign capital markets, reduce obstacles and standardize the capital market of Fujian Province. Therefore, the two-way opening cooperation is conducive to the healthy and stable development of the capital market of Fujian Province and can accelerate its growth of the capital market of Fujian Province.

Thirdly, it should have precise positioning of financial development and comply with “serving the real economy” so that financial development and the real economy can form a complementary system. As there is a significant gap in the level of financial development between regions, there is also a significant difference in the stock of financial

scale. The less developed regions, the higher the cost of financing. Therefore, when the financial scale threshold is too small, financial development will inhibit the growth of the real economy, resulting in the development of the real economy being hampered. To ensure the steady development of the real economy, Fujian Province should have precise positioning of its financial development and increase the stock of financial scale so that the development level of the real economy can be improved to a certain extent.

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