

# Islamic Education for A Sustained Growth of Participation Banking: Evidence from Imam Hatip Schools and Theology Faculties in Türkiye

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## Abstract

This study delves into the impact of Islamic education in Türkiye, through Imam Hatip schools from 2002 to 2022 and Theology Faculties 2006 to 2022, on the growth of participation banking from 2006 to 2022. It aims to discern if the principles instilled by Islamic education impact financial behaviors towards Islamic banking. A quantitative analysis was conducted, using multiple regression model alongside the proper diagnostics tools, to address the research question. The results indicate a persistent significant positive impact of Islamic education in both Imam Hatip schools and theology faculties in fostering participation in Islamic banking. Additionally, the study reveals a time-lagged effect of Islamic education on banking decisions, which shows that there is a gradual impact of religious education on financial behaviors. These findings contribute to understanding the role of Islamic education in shaping financial decisions in a secular, predominantly Muslim society. It offers insights into the socio-economic dynamics of modern Türkiye and have implications for policymakers and financial institutions. The results suggest that policymakers, in their aim towards achieving a sustained financial inclusion, should focus on the long-term and pay attention to the financial education of future generations.

**Keywords:** Islamic Education, Participation Banking, Financial Behavior, Türkiye, Religious Influence

## Introduction

Since the 1980s, and markedly under the Justice and Development Party (AK Party)'s governance, participation banks adhering to Shariah law have burgeoned, reflecting a global resurgence in Islamic finance despite Türkiye's secular fabric. Yet, the acceptance of these banks remains tempered by a society that often values financial pragmatism over religious adherence. Notably, by September

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2023, the market share of these participation banks in Türkiye's banking sector had grown to 8.5% of total sector assets, up from 5.4% in 2018, which signifies their increasing prominence in the national economy (Fitch Ratings, 2023).

Imam Hatip schools, historically integral to Türkiye's education system, have undergone significant transformations to integrate Islamic teachings with secular curricula. The objective of that is to reflect a nuanced balance between Türkiye's secular policies and Islamic heritage. This evolution raises questions about the schools' role in influencing students' financial behaviors, particularly towards Islamic banking.

The importance of the interplay between religious education and financial choices is further highlighted by the broader influence of religion on corporate practices. The degree to which religious beliefs, fostered through educational institutions like Imam Hatip schools, and Theology Faculties permeate individual and corporate financial decisions in a predominantly Muslim yet secular country forms the crux of this study.

This analysis explores whether the values taught in Islamic institutions relate to the financial decisions of individuals in the Islamic banking sector. The paper examines how financial indicators of participation banks are affected by the enrollment growth at Islamic educational institutions for the years between 2002 and 2022. It aims to empirically investigate the extent to which Islamic education, as embodied by Imam Hatip schools and theology faculties, influences individual financial behaviors, particularly the propensity to engage with Islamic banking services in Türkiye. It seeks to elucidate the potential correlation between the ethos of Islamic education and the choices made in the financial sector, offering insights into the broader societal implications of this interplay.

## **Review of the Literature**

### **❖ Islamic Banking in Türkiye**

The landscape of Islamic banking in Türkiye, named participation banking, is an important component of the Turkish financial sector, contributing to the country's economic stability and growth. The relationship between Islamic finance and economic development in Türkiye has been well documented. For example, El-Galfy and Khiyar (2012) illustrated the role of Islamic finance in fostering macroeconomic

stability. Similarly, Ledhem and Mekidiche (2022) performed an empirical analysis from 2013 to 2019 and illustrated that the Islamic financial sector has contributed to Türkiye's economic growth. Such studies collectively highlight the sector's alignment with the New Turkish Economy Program's objectives.

The development of participation banks in Türkiye, evident since the 1980s and particularly under the AK Party's governance, has been marked by substantial growth and integration into the Turkish banking sector (Ledhem,2022). Initially termed Special Finance Houses and later renamed as Participation Banks in 2005, these institutions have thrived due to legislative reforms and a supportive political environment. This growth signifies a global resurgence in Islamic finance, as these banks present a unique proposition by avoiding interest-based transactions and advocating for ethical investment strategies (Egresi & Belge, 2015).

Nevertheless, the increasing recognition of Islamic finance's role in Türkiye's economic development is noteworthy. Studies, such as the empirical analysis by Čihák and Hesse (2010) on the dynamics of Islamic Banks and Financial Stability, and the work by El-Galfy (2012), indicate that Islamic banking contributes to macroeconomic stability and presents benefits such as risk-sharing, poverty alleviation, and reducing inequality. These aspects are central to the broader aims of economic development policymakers and resonate with the principles of ethical and sustainable growth. The introduction of financial products that adhere to Islamic Shariah principles has been pivotal to the sector's substantial contribution to Türkiye's economic terrain, as evidenced by comparative studies on the performance between Islamic and conventional banking (El-Galfy, 2012; Čihák & Hesse, 2010).

In summary, the growth of Islamic finance in Türkiye illustrates its potential as a driving force for economic development. The sector's ongoing transition from a specialized market segment to a notable player in the national economy highlights its growing relevance and importance within Türkiye's financial and economic infrastructure.

#### ❖ **Societal Perceptions and Acceptance of Islamic Banking**

In the domain of public perception of Islamic banking, the study of Ustaoglu (2018) offers profound insights. The author primarily focused on the Turkish public's views and concerns regarding participation banking, a synonym for Islamic banking, especially its adherence to Islamic precepts. Ustaoglu (2018) study utilized surveys

to gauge public awareness and attitudes based on various demographics like education, income level, and religiosity. A critical finding of this study is the eroding confidence in the “Islamic” identity of Islamic finance institutions in Türkiye. This skepticism stems from the perceived convergence of these institutions with their conventional counterparts, raising doubts about their adherence to Islamic principles. The study’s empirical analysis of public opinion reveals a growing controversy over whether these banks can genuinely be considered as Islamic in their operations and principles. This perhaps suggests that it is very important for the participation banks in Türkiye to monitor and address the public perception about their activities.

Following this, the study by Gökçen and Gönen (2017) delves further into the societal perceptions and acceptance of Islamic banking in Turkey. The research focuses on the Turkish public's views regarding participation banking. It revealed the eroding confidence in the Islamic identity of these financial institutions. The study uncovers skepticism due to the perceived convergence of Islamic banks with conventional ones, questioning their adherence to Islamic principles. The study’s empirical analysis indicates a controversy over whether these banks genuinely uphold Islamic operations and principles, underlining the need for participation banks in Turkey to actively address public perception.

In a study conducted by Pilatin (2022), the preferences for participation banking in Turkey are quantified, shedding light on the nuanced decision-making criteria of customers. The research shows that Islamic Banking Services score highest with an average rating of 4.26 out of 5, closely followed by Religious Sensitivity at 4.16, indicating the pivotal role of faith-aligned banking. Practical considerations are also significant, with fees for electronic fund transfers, commissions, and other charges receiving an average importance rating of 3.57. Other contributing factors include Advertising and Promotion at 3.37, the User-Friendliness of Mobile Applications at 3.32, and the Variety of Products and Services at 3.19. Bank Employees' Approach to Customers and Competitive Pricing both scored around 3.16, suggesting that personal customer service and financial competitiveness are also valued. The study encapsulates the multi-faceted nature of customer preferences, where a synthesis of religious values and pragmatic banking needs dictates the choice of participation banking services in Turkey, reflecting the intricate interplay between the country's financial preferences and its cultural ethos.

In summary, the literature collectively underscores a complex public perception landscape of Islamic banking in Türkiye, marked by skepticism over its adherence to Islamic principles and a discernible preference for financial pragmatism, despite the growth of participation banking. This highlights the need for participation banks to actively address and reconcile public concerns regarding their Islamic identity and operational principles.

#### ❖ **Islamic Education in Türkiye**

In 2012, Türkiye introduced the 4+4+4 education system, a significant reform that restructured the basic and secondary education into three four-year stages, thereby extending compulsory education to 12 years. This system, encompassing primary education (ages 6-10), lower secondary education (ages 10-14), and upper secondary education (ages 14-18), facilitated a diverse and progressively specialized curriculum. Notably, the reform had a pronounced impact on Imam Hatip schools, institutions specializing in religious education, leading to a marked increase in their student enrollment.

Imam Hatip schools, a main component of Türkiye's educational system, have experienced profound transformations, particularly since their establishment in the early 20th century. These schools were initially designed to train religious functionaries but have evolved into a complex blend of religious and secular education in recent years. This evolution is reflective of strategic educational reforms aimed at integrating Islamic education within the national curriculum, thereby acknowledging Türkiye's secular governance while honoring its Islamic heritage (Aşlamacı & Kaymakcan, 2017).

The curriculum of Imam Hatip schools is emblematic of this balance. It fuses vocational religious courses with secular academic subjects, aiming to cultivate individuals proficient in both Islamic and contemporary secular sciences. This curriculum reflects a desire to develop well-rounded religious figures who are attuned to the modern world's demands, mirroring the schools' foundational goals. However, the continuous adaptation of these goals and the curriculum, influenced by Türkiye's shifting political and societal landscapes, highlights an ongoing discourse about the balance between religious and secular education (Öcal, 2015).

Aşlamacı (2017) delves into the historical and contemporary significance of participation banking institutions, outlining their educational approach that bridges 'traditional' and 'modern' pedagogies. Complementing this, Çakmak (2009)

analyzes the impact of Kemalist reforms on the development of Imam Hatip schools, exploring the tension between secularism and Islamism in Türkiye's education system. Çakmak's findings suggest that the reforms, which included the dissolution of religious orders and the introduction of Western educational practices, have had a profound effect on these schools, often considered a symbol of the interplay between religious tradition and state-imposed secularism.

Furthering this exploration, Koyuncu (2023) provides a critical perspective on the institutional and social challenges these schools face. Koyuncu outlines the struggles of Imam Hatip schools in navigating the Turkish education system, their evolving aims, and the social expectations surrounding them, including their temporary closure and subsequent reopening, structural changes, and their pivotal role in political debates on secularism.

Complementing the exploration of Imam Hatip schools, the work of Osmanoğlu (2017) provides a critical analysis of higher religious education and institutional alienation in Theology Faculties. Osmanoğlu (2017) examines the growing diversity in student backgrounds and the broadening of programs, highlighting the increasing presence of students with varying beliefs, cultures, worldviews, and lifestyles. The paper delves into the sense of institutional alienation felt by students, influenced by various factors, and its implications for religious education and practice in Türkiye (Osmanoğlu, 2017). These previous studies collectively illuminate how Imam Hatip schools likely influence financial preferences and behaviors, especially towards Islamic banking. This reflects the intricate connection between religious education and economic trends in modern Türkiye, amidst ongoing debates about the role of these schools in achieving a balance between Islamic values and secular professional roles in the context of Türkiye's evolving political climate (Çakmak, 2009).

The evolution of Imam Hatip schools which mirrors the intersection of religious and secular education in Türkiye, underscores a potential bridge to understanding the broader impact of Islamic education on financial decision-making, particularly as it relates to the growing affinity for Islamic banking services within the context of Türkiye's socio-economic landscape.

### ❖ **The Role of Religious Education in Financial Choices**

The influence of religious education on financial decision-making is a multifaceted area of study that has garnered significant attention. The research by Swenson (2012) exemplifies the profound impact that religious beliefs, prevalent in Western religions like Christianity, Islam, and Judaism, have on shaping financial behaviors and attitudes. Swenson's findings reveal that companies in countries with a dominant Western religious influence tend to produce more conservative and timely financial reports. This further supports the hypothetical influence Islamic education has on banking choices in Türkiye.

In the Islamic context, the effect of religious education on financial decisions is further explored in studies like that of Zaid (2019) who indicated that a heightened sense of religious consciousness is closely linked to a favorable view of Islamic banks. This underscores the integral role of religiosity in shaping financial preferences, particularly in the context of Islamic banking.

Mahdzan et al. (2017) explored the intricate relationship between Islamic religiosity and investment choices, complementing existing perspectives on participation banking preferences. The research concluded that while general religiosity may not significantly sway portfolio allocation, specific religious dimensions such as virtue and obligation do influence financial decisions, especially in the allocation of risky assets. The study further emphasizes that individuals with a strong adherence to Islamic principles tend to favor Shariah-compliant financial products. Despite this preference, a low participation rate in such products suggests potential market gaps or a lack of awareness among consumers. This indicated that the alignment with religious values is a decisive factor in financial behavior, though it is also affected by practical considerations of product availability and information dissemination.

The complex relationship between religiosity and trust, especially in the realm of Islamic banking, further adds to this dynamic. The interplay of these factors has a profound combined impact on financial decisions, especially among individuals prioritizing religious adherence in their economic activities (Zaid, 2019).

The influence of religion also extends to corporate financial reporting practices. As Swenson (2012) notes, the type of religion predominant in a country can significantly shape financial practices and transparency. In regions where Western religions are

prevalent, firms tend to report more conservative earnings and exhibit greater transparency and timeliness in financial reporting.

In summary, the growth and evolution of Imam Hatip schools under the AK Party's governance reflect a broader trend of integrating Islamic education within the public education system. This development, embodying Türkiye's unique intersection of secular and Islamic values, highlights the dynamic interplay between the country's secular traditions and Islamic cultural heritage. It underscores how religious education remains a pivotal factor in the discourse on religion's role in public life and financial decision-making in Türkiye, providing an intriguing backdrop for examining the alignment or divergence of Islamic educational influences from global patterns, particularly in shaping attitudes towards Islamic banking. While the scholarly focus on Imam Hatip schools has been primarily within the educational framework and their impact on students, this paper contributes to filling the gap by aligning this type of schooling with the spread of Islamic finance.

## **Methodology**

### **❖ Variables and Data**

This study adopts a quantitative research design, analyzing secondary data spreading from 2002 to 2022 for Imam Hatip's and 2006 to 2022 for others, to examine the relationship between Islamic education and Islamic banking in Türkiye. A meticulous approach has been taken to ensure the clarity and precision of the data used. Rather than utilizing raw numbers, which can be influenced by extraneous factors such as population growth and general economic situation, ratios have been employed as a more accurate measure. Further, one of the strengths of this study is its reliance on multiple sources of official and published statistics, which enhances the reliability of the results compared to surveys. The main variables that are included in the models are as follow:

**Dependent variable:** This study uses the Share of Deposits of Participation Banks in relation to the entire banking sector as the dependent variable as the indicator of Participation banking. The rate is derived from the proportion of deposits held in Islamic banks relative to the total deposits across the entire banking sector. Both numbers were taken from the Central Bank of the Republic of Türkiye (CBRT). This variable depicts the share of participation banks in the national deposit market.

**Independent focus variables:** In this research, three main educational variables were used. Each variable represents a different aspect of the Islamic educational fabric of the country. The first variable is the Imam Hatip Students Ratio. This variable is calculated as a proportion of the total number of high school students in Türkiye. This approach offers insight into the relative scale of religious education's popularity. The needed data to calculate this ratio was retrieved from the Ministry of National Education (MEB). MEB, is the authority responsible for educational administration in Türkiye. As shall be explained in more details later, the Imam Hatip students are expected participate in the banking system and in the productive side of the economy at least 4 years into the future. Thus, the paper also used the 4-Year lagged Imam Hatip Students Ratio as another form of the Imam Hatip education system.

Additionally, we used the rate of theology students to total university students, Theology Students' Rate, as the third measure of Islamic education in Türkiye. Enrollment figures for İlahiyat Fakültesi (Faculty of Theology), İslami İlimler Fakültesi (Faculty of Islamic Sciences), and Dini İlimler Fakültesi (Faculty of Religious Studies) were retrieved from Council of Higher Education (YÖK)'s statistical portal. The total was then divided by the total university population retrieved from the same ministry. Using three different indicators if Islamic education helps in insuring more robust results.

**Other control variables:** Multiple control variables were added to the model to control for both exogenous and endogenous factors that play a role in the growth of participation banking in Türkiye. The exogenous control variables contain GDP Growth as well as the Inflation rate. Data for both variables was mined from the World Bank's WDI database. On the other hand, the endogenous control variables are two. The first is the differences between profit rate and interest rate, Profit/Interest Rates Difference. This is an annual measure that quantifies the disparity between the returns provided by Islamic banks to depositors and the prevailing interest rates offered by commercial banks. This metric reflects the competitive position of Islamic banking in the financial market, influencing customer preferences based on relative financial attractiveness. The interest rate data was collected from the central bank while the profit rate data was collected from Participation Banks Association of Türkiye (TKBB), a representative body for Türkiye's Islamic banking sector. The second endogenous control variable is the Ratio of Advertisement to Total Expenses. This variable assesses the annual proportion of a bank's total expenditures allocated to advertising and promotional activities. A higher ratio indicates a strategic focus on visibility and brand presence

in the market, potentially translating into increased customer acquisition and market penetration for Islamic banking services.

### Research Model

In this study, we conducted multiple regression analyses to investigate the relationship between the development of Islamic education and the Islamic banking sector in Türkiye. Using R Studio, we implemented multiple linear regression tests on three different models to explore the relationship between the prevalence of Islamic education and the utilization of Islamic banking services. The equation for the regression is denoted as follows:

$$Y = \alpha_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3$$

$$X_{3i} + \beta_4 X_{4i} + \varepsilon$$

Y: Participation banking deposit share.

$\alpha_0$ : Intercept

$X_{1i}$ ,  $X_{2i}$ ,  $X_{3i}$ ,  $X_{4i}$ : Values of the variables indicated above (one focus variable + 4 control variables) in the respective observation year

i: Denotes the observation or time point, ranging from 1 to 17.

The equation is applied to three different focus variables at a time, resulting in three models.

**Diagnostic Testing:** Our regression models underwent rigorous testing to ensure their reliability. We employed a suite of statistical assumption tests, including normality validation through Q-Q plots and Jarque-Bera tests. Linearity and homoscedasticity were confirmed via Residuals vs. Fitted plots. Multicollinearity was assessed with Variance Inflation Factor (VIF) analysis to ensure predictor independence. We excluded anomalous data points using Cook's Distance and detected minimal autocorrelation through the Ljung-Box test. These tests collectively validate the models' adherence to statistical assumptions, reinforcing the reliability and robustness of our findings.

### Empirical Findings

Table 1 below illustrates the descriptive statistics for the variables examined in this study, capturing the annual trends from 2006 to 2022 within the Islamic banking

sector and in Türkiye. The statistics summarize the fluctuations in educational and economic determinants over the 21 years.

Table 1: Descriptive statistics for all variables used in the study

	<i>Count</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>
<b>Dependent Variable:</b>					
Share of Deposits of Participation Banks	17	0.03783	0.10324	0.0652	0.01880
<b>Educational Determinants:</b>					
IH Students Ratio	17	0.03317	0.12024	0.0766	0.03110
4-Year lagged IH Students Ratio	17	0.03317	0.10419	0.0603	0.02730
Theology Students' Rate	17	0.00175	0.01733	0.0100	0.00545
<b>Banking Sector Determinants</b>					
Profit/ Interest Rates Difference	17	-0.07083	0.00660	-0.0266	0.01821
Ratio of Advertisement to Total Exp	17	0.01580	0.06851	0.0295	0.01347
<b>Macroeconomic Determinants</b>					
GDP Growth	17	-0.04823	0.11439	0.0502	0.04058
Inflation	17	0.06251	0.72309	0.1398	0.15469

Min: Minimum. Max: Maximum. SD: Standard Deviation

Table 2, however, presents the correlation matrix that provides a preliminary view of the relationships between the deposit ratios in the Islamic banking sector and a range of educational and economic indicators over the period from 2002 to 2022. While the matrix reveals several noteworthy correlations, it is important to recognize that these figures do not imply causation but merely indicate potential areas for further investigation.

Correlations, both positive and negative, are observed across various pairings of variables, setting the stage for more in-depth analysis to determine the underlying factors and causative links within the context of the study.

Table 2: Correlation table for all variables

	<i>Deposits Ratio</i>	<i>Students Ratio</i>	<i>Lagged Student Ratio</i>	<i>Theology Students Ratio</i>	<i>Difference Profit Deposit</i>	<i>Advertisement Rates</i>	<i>GDP Growth</i>	<i>Inflation</i>
<i>Deposits</i>	1							
<i>Students Ratio</i>	0.78*	1						
<i>Lagged</i>	0.83*	0.80*	1					
<i>Theology Students</i>	0.80*	0.94*	0.77*	1				

<i>Difference</i>	-0.32	-0.6*	0.61*	-0.52*	1			
<i>Profit</i>								
<i>Advertisement</i>	-0.38	-0.48*	-0.29	-0.58*	0.12	1		
<i>GDP Growth</i>	0.14	0.09	-0.14	0.10	-0.14	-0.04	1	
<i>Inflation</i>	0.58*	0.34	0.55*	0.44*	-0.27	-0.14	-0.03	1

\* Significant at 10 percent level.

The correlation analysis within Türkiye's financial sector unveils a compelling narrative: as can be seen in Figure 1, as the student population within Imam Hatip schools increases, there appears to be a corresponding uptick in the utilization of Islamic banking services. The positive correlation between the rate of Imam Hatip school students among total high school students and the rate of deposits in Islamic banks quantifies this observation. Statistically, this relationship is affirmed by a p-value of 0.0002, denoting a highly significant correlation that is unlikely to be due to chance.

However, it is crucial to consider the potential lag effect when interpreting these

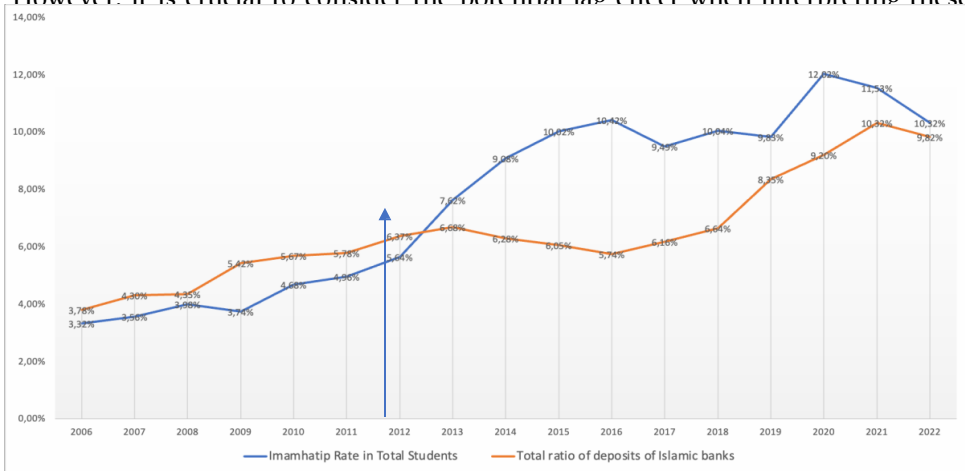


Figure 1: The Correlation between the Imam Hatip Students Ratio and the Islamic Participation Banks Deposits Ratio

The graph representing this data paints a parallel increase in both educational engagement and banking preferences. The lines on the graph, ascending in harmony, visually reinforce the statistical findings, offering a clear depiction of how closely the trends in education and Islamic banking are interwoven. This upward trajectory in both education and financial choice points to a broader socio-economic pattern, where the principles taught in religious institutions are reflected in the pragmatic financial decisions of individuals.

### Regression Analysis

Table 3 presents a series of regression models that lay the groundwork for an in-depth discussion in the subsequent sub-sections of the paper. Each model and its variables, highlighting the interplay between Imam Hatip and theology school enrollment and the growth of Islamic banking in Türkiye, will be thoroughly dissected to elucidate their individual and collective impact within the scope of the study's time frame from 2006 to 2022. The detailed examination to follow will unpack the nuances and implications of these findings.

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Table 3: Regression Analysis for 5 Models

	<b>Imam Hatip Model</b>	<b>IH Model With 4-year Lag</b>	<b>Theology Model</b>
Profit/ Interest Rates Difference	0.315 [0.190]	0.403* [0.144]	0.193 [0.193]
Ratio of Advertisement to Total Expenses	0.075 [0.231]	-0.152 [0.153]	0.188 [0.276]
GDP Growth	0.037 [0.065]	0.156* [0.052]	0.033 [0.071]
Inflation	0.045* [0.018]	0.010 [0.015]	0.032 [0.021]
Imam Hatip Students Ratio	0.519** [0.128]		
4-Year lagged Imam Hatip Students Ratio		0.716*** [0.115]	
Theology Students' Rate			2.943** [0.850]
Constant	0.023	0.027**	0.028*

	[0.013]	[0.008]	[0.013]
Observations	1	1	1
R Squared	0.7832	0.8801	0.7416
Adjusted R Squared	0.6846	0.8257	0.6241
P-value (Model)	0.0021***	0.00009***	0.0053***
Jarque-Bera Test X2	0.202	0.14476	5.8436
Jarque-Bera Test p-value	0.9039	0.9302	0.05384'
Ljung-Box Test X2	4.1851	0.61659	4.3112
Ljung-Box Test p-value	0.1234	0.7347	0.1158

\*\*\* =  $p < 0.001$ , \*\* =  $p < 0.01$ , \* =  $p < 0.05$ , ' =  $p < 0.1$

### Basic Imam Hatip Model

The regression model, denoted as the Imam Hatip Model in table 3, sheds light on the factors that may influence the growth of Islamic banking. The model suggests a significant impact of the rate of Imam Hatip students to total high school students and the dependent variable, indicating educational influence as a considerable factor. Inflation also appears as a significant predictor, which could reflect the broader economic context impacting the banking sector's performance.

The model's R-squared value suggests a strong fit, with a substantial proportion of variability in Islamic banking growth being explained by the variables chosen. The Adjusted R-squared value accounts for the number of predictors in the model, offering a more conservative estimate of the fit, yet still indicates a good level of explanatory power. The model sets the stage for a deeper examination of how these variables interact and influence the Islamic banking sector within Türkiye.

### The 4-Year Lagged Imam Hatip Model

The lagged model, grounded in the context of Imam Hatip schools, offers a delayed perspective on graduates' interaction with Islamic banking. It moves beyond immediate educational impacts, tracing the gradual influence of religious education on the financial decisions of graduates as they enter the workforce. This delayed effect is substantiated by the model's statistical significance, suggesting that the true impact of Imam Hatip schooling unfolds over time.

Further analysis reveals a shift in the significance of the financial performance indicator, where it transitions from non-significant in the normal model to significant in the lagged model. This shift to significance at the 5 percent level in the lagged model highlights a more profound connection between the educational variables and Islamic banking trends when a temporal lag is considered. Looking at the R squared value of the model, it seems the estimation power increased to 88%

from 78% in the basic model. This suggests that the lagged model might be a better fit to understand the impact of education. The refined lagged model, with its

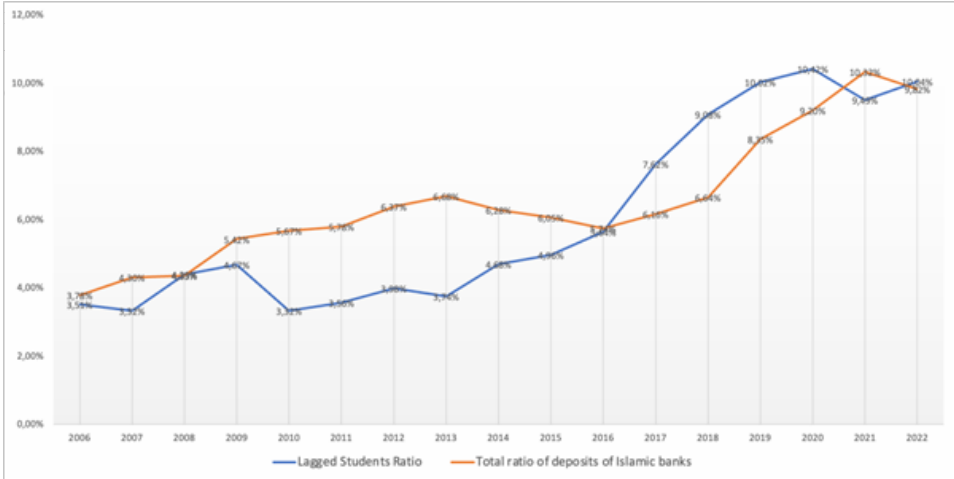


Figure 2: Correlation between Y4 Lagged Imam Hatip Students Ratio and the Islamic Participation Banks Deposit Ratio

### The Theology Education Model

This analysis investigates the impact of theology faculties, including both general theology and Islamic sciences, on the growth of Islamic banking. Enrollment rates in these faculties, while lower than in Imam Hatip schools, show a significant impact with the Islamic banking sector's expansion. The regression analysis, depicted in Table 2, indicates a strong impact of theology student enrollment on Islamic bank deposits. This finding is particularly notable given the relatively small size of theology faculties. It suggests that even a slight increase in theology student numbers, rising from an average of 0.18% in 2006 to 1.73% in 2022, is associated with considerable growth in the Islamic banking sector.

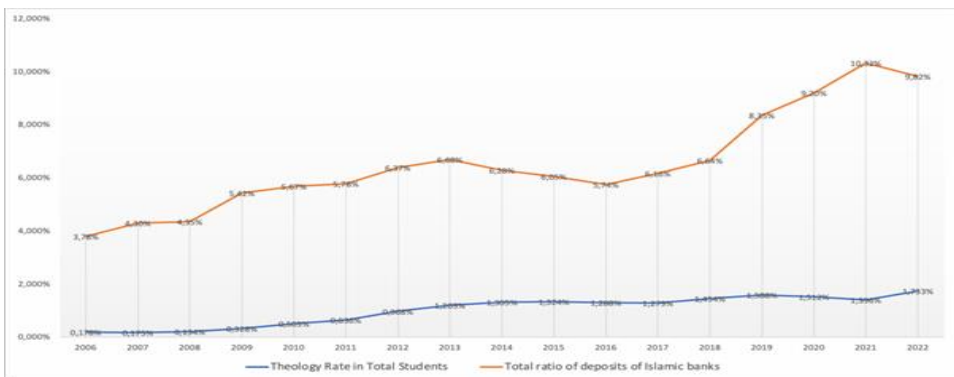


Figure 3: The correlation Between the Theology Students' Rate and the Islamic Participation Banks Deposits Ratio

This relationship is consistent with broader socio-economic patterns where the principles of Islamic theology potentially influence financial choices, albeit with a different scale of impact compared to Imam Hatip schools. While Imam Hatip schools have a more pronounced rate of enrollment, the influence of theology faculties on banking choices is disproportionately significant, indicating a dedicated segment within the population that aligns their financial decisions with their religious education.

## Diagnostic Tests

### ❖ Normality of Residuals

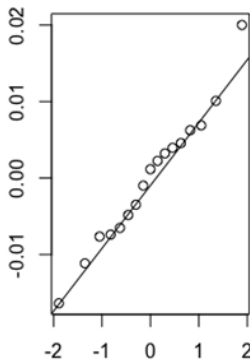


Figure 4: Basic Imam Hatip Model

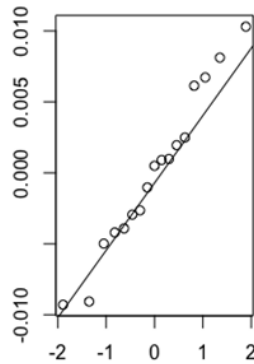


Figure 5: 4-Year Lagged Model

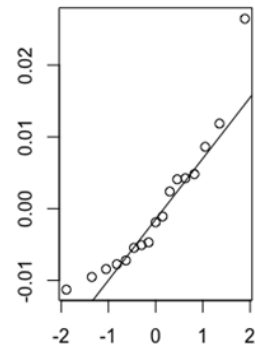


Figure 6: Theology Model

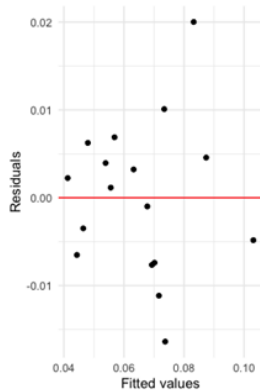
The assessment of residual normality within the regression models was performed using Q-Q plots and Jarque-Bera tests. The Imam Hatip Model demonstrated normally distributed residuals, as evidenced by a Jarque-Bera p-value significantly exceeding conventional significance levels. This pattern of normality was consistently observed in the lagged model, with an even higher p-value suggesting a strong alignment with the normal distribution assumptions.

Similarly, the models incorporating a 4-year time lag, maintained this trend, yielding p-values that reinforce the presence of normality in the distribution of residuals. On the other hand, the Theology Model, while displaying a p-value marginally above the threshold, did not show substantial deviation from normality, although the proximity to the significance level warrants a careful evaluation.

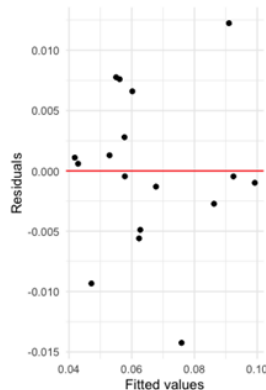
Collectively, these high p-values across the models substantiate the normality assumption, lending credence to the regression analyses' robustness and the

educational variables' impact on banking trends, thereby enhancing the integrity of the research findings. As it can be seen in Table 2 The Jarque-Bera test results, particularly the p-values in the upper 0.90s for the initial models, and the value just over 0.05 for the Theology Model, provide quantitative support for these qualitative assessments.

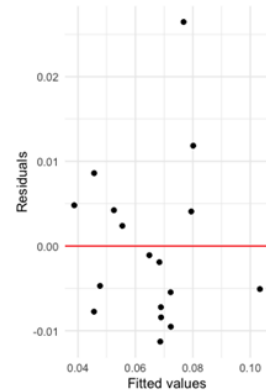
### ❖ Linearity and Homoscedasticity



*Figure 7: Imam Hatip Model*



*Figure 8: 4-Year Lagged Model*



*Figure 9: Theology Model*

The Residuals vs. Fitted plots for the models in the study are pivotal for assessing the assumptions of linearity and homoscedasticity, crucial for the validity of regression analysis. The plots from the Imam Hatip Model exhibit a random dispersion of residuals around the horizontal axis. This pattern is indicative of an absence of systematic error, reinforcing the linearity of the models. The plots show a consistent spread of residuals, suggesting homoscedasticity, although a few potential outliers are noted, which warrants further investigation.

In contrast, the 4-Year lagged model, reveal a slight deviation from randomness in the spread of residuals. This could imply issues with linearity. Nonetheless, the spread of residuals does not display a pattern of increasing or decreasing variance, which supports the assumption of homoscedasticity.

The Theology Model's plot slightly deviates from these patterns, hinting at possible non-linear relationships. The curve observed in the residual spread is subtle, yet it suggests that the model may benefit from considering non-linear transformations of the predictors. Despite this, the plot does not display any signs of heteroscedasticity, as the variance of residuals remains constant across the range of

fitted values. Each model's diagnostic plot highlights the importance of scrutinizing for outliers, as their presence could influence the regression estimates and subsequent conclusions.

### ❖ Multicollinearity

The Variance Inflation Factor (VIF) analysis across the models reveals that the highest values observed hover around the lower to mid-2s, with the peak being just above 2.6 in one of the models. These figures indicate a slight degree of multicollinearity which, while notable, does not reach the threshold typically associated with significant concern. The consistency of VIF values below critical levels across all models suggests that the predictors maintain a reasonable degree of independence from one another.

In the context of the models with a time-lagged component, the highest VIF values suggest a natural increase in correlation due to the inclusion of past values as predictors. Nonetheless, these values do not imply an excessive increase in the variance of the coefficients, and thus, the results remain statistically reliable.

### ❖ Influence Points

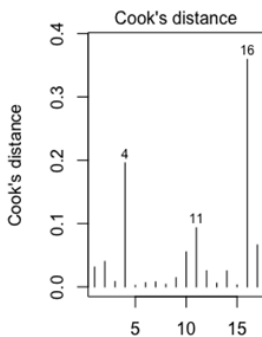


Figure 10: Imam Hatip Model

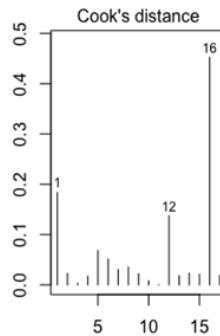


Figure 11: 4-Year Lagged Model

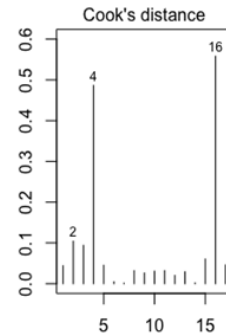


Figure 12: Theology Model

Overall, the VIF findings support the conclusion that the regression analyses are robust, with multicollinearity kept within manageable bounds. The models' estimates, therefore, can be interpreted with confidence, affirming the validity of the inferences drawn about the influence of educational variables on banking trends.

In the process of assessing the robustness of our regression models, an anomalously high inflation rate for the year 2022 was identified. Recognizing its potential to unduly skew the analysis, the decision was made to exclude the inflation rate from the models before conducting Cook's Distance tests for influential data points. This prudent step was taken to mitigate the outsized influence of this atypical observation, ensuring that the resultant models provide a more accurate reflection of the underlying economic relationships being studied.

The Cook's Distance tests were then performed to identify influential observations across the models. The results indicated that, following the adjustment for inflation, there were no individual data points that exerted an excessive influence on the parameter estimates of the models. This finding suggests that the models are robust to the effects of influential points and that the regression coefficients are reliable estimates of the true effects. The absence of influential points strengthens the validity of the models, confirming that the relationships inferred from the regression analyses are not artifacts of peculiar data points but reflect the underlying economic phenomena.

#### ❖ **Autocorrelation**

The Ljung-Box test, applied to assess autocorrelation within our time series models with a lag of 2, reveals a consistent pattern across both the Basic Imam Hatip Model and the Theology Model, as shown in Table 2. For these models, the p-values indicate no significant autocorrelation, affirming the statistical robustness of their residuals. While the p-values are relatively close to the conventional significance threshold, they remain above it, suggesting that the evidence is not strong enough to confirm significant autocorrelation. The 4-Year Lagged Model, in contrast, shows a markedly higher p-value, providing even stronger evidence against the presence of autocorrelation. Collectively, these results underscore the reliability of the models in the context of autocorrelation, with the Basic Imam Hatip and Theology Models demonstrating a similar level of autocorrelation absence, albeit slightly closer to the significance threshold than the 4-Year Lagged Model.

## **Discussion of Results**

This research explored the impact of Islamic education and the growth of Islamic banking in Türkiye, with a specific focus on Imam Hatip schools and Theology Faculties. The empirical analysis revealed significant impact of the latter on the relative share of the Participatory banking deposits, for all the models of the study.

This finding illustrates that the ethos of Islamic education, particularly from these institutions, may contribute into a sustainable and growing Islamic financial sector. This would be due to the consumers' financial behaviors favoring Islamic banking services.

The regression models, including the Imam Hatip Model, 4-year lagged Imam Hatip Model, and the Theology Model, consistently indicated a meaningful relationship between Islamic education enrollment and the adoption of Islamic banking. Notably, the Lagged Model, demonstrated an enhanced fit and stronger predictive power, underscoring the time-adjusted impact of religious education on economic behavior. This finding aligns with the initial hypothesis and echoes the literature that highlights the role of education in shaping economic decisions within a religious context.

Furthermore, the study's insights into the lagged influence of pre-university education on banking trends are particularly compelling. The lagged model suggests that the impact of Islamic education on banking preferences is not immediate but evolves over time, as graduates integrate into the economy and begin making independent financial decisions. This delayed effect provides a deeper understanding of how educational experiences shape the future financial landscape, especially in the context of Islamic banking.

The research also highlights the complexity of this relationship, suggesting that other socio-economic factors, such as Türkiye's economic growth and especially the inflationary pressures likely play a role in the observed patterns. The analysis provided by this study contributes significantly to the discourse on the interplay between education and finance in an Islamic context, offering valuable insights for policymakers and financial institutions looking to cater to a market segment influenced by religious education.

In conclusion, the findings from this study provide robust evidence supporting the hypothesis that Islamic education, particularly through Imam Hatip schools and Theology Faculties, has a significant influence on the growth and patronage of Islamic banking in Türkiye. This relationship, however, is complex and multifaceted, warranting further exploration to fully understand the mechanisms through which education influences banking behaviors and preferences in Islamic contexts. This paper suggests that policymakers should consider playing the long-term game when planning for a sustained Islamic financial services sector. Upholding this approach might be more effective than a narrow short-term approach.

While the authors of this paper tried their best to prepare a robust and reliable paper, there are always limitations that played a role in restricting the quality of the work. The primary constraint lies in its quantitative focus, which limits the exploration of individual motivations and broader socio-economic factors that could influence the results. Additionally, the reliance on a limited sample size and the presence of potential outliers, particularly in the time-series data, may affect the generalizability of the findings. Future research could address these limitations by incorporating qualitative methods to capture more nuanced perspectives and expanding the sample size to increase the robustness of the analysis.

## **Conclusion**

This study has shed light on the impact of Islamic education and the growth of Islamic banking in Türkiye, focusing on Imam Hatip schools and Theology Faculties. We used a multiple regression analysis, which was further empowered by the proper diagnostics tests, to uncover a clear trend: Islamic education, seen in enrollment numbers, positively influences the expansion of Islamic banking. Our findings also point to a latent impact, showing that the effects of Islamic education on banking preferences unfold gradually over time. These insights are crucial for understanding not only short-term outcomes, but also long-term economic behaviors influenced by religious education. Looking ahead, future research could explore this relationship in different settings or dig deeper into how Islamic education shapes economic decisions.

Considering this findings, policymakers and industry players in Türkiye are recommended to develop a well- thought-out plan for the growth of participation banking. This plan should not only focus on short to mid -term goals but also have a long-term perspective. Promoting financial education, not only in Islamic schools but across all educational systems, is key to reaching a sustained financial sector.

Taking note of the current fast developments of the financial sector through financial technology, education can be the solution for a better financial inclusion and participation of the future generations with financial services. This is the essence of attaining sustainable growth in the financial sector.

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- The authors agree to take responsibility for every facet of the work, making sure that any concerns about its integrity or veracity are thoroughly examined and addressed

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