

Re-examining the Impact of Financial Development on the Economic Growth of North Cyprus Through the Moderating Role of the Education Sector

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**Re-examining the Impact of Financial Development on the Economic Growth of North
Cyprus Through the Moderating Role of the Education Sector**

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Abstract

This study examines the impact of financial development on economic growth with the multiplier effect of the higher education by employing yearly data covering the years between 1990 and 2018 measured in TL. The results reached could shape the policies in achieving sustainable economic growth. Co-integration between the series are tested with ARDL based bounds test; since Zivot-Andrews structural unit root test results showed that variables are integrated at different orders. Furthermore, FMOLS and DOLS are applied to check for robustness. Moreover, Toda-Yamamoto Causality test is employed to test for the causal relationship between the series. Results show that there is a bidirectional causal relationship between financial depth and economic growth; and unidirectional causal relationships from money supply to financial depth, from economic growth and financial depth to education sector. Diagnostic and stability tests results confirm the reliability and stability of the parameters of the model employed.

Keywords: Economic Growth, TRNC, Financial Development, Education Sector

INTRODUCTION

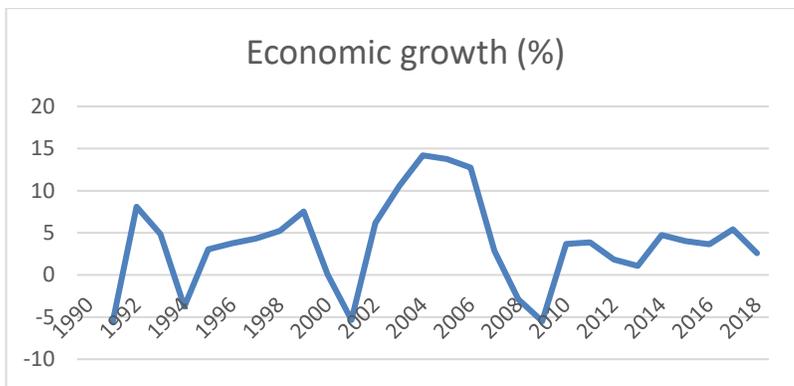
North Cyprus has the disadvantage of being a small island country not recognized as an independent state, which negatively affects its economy. This isolation from the world economy makes it harder to stabilize economic growth even more difficult; and it clearly demonstrates the need for different economic policies than those implemented in other small island states. Sustainable economic growth is enhanced with increase in real Gross Domestic Product (GDP) by increasing the number of goods and services produced and the productivity of the factors of

production over time. The political status, sanctions on trade and commerce, and dependence on Turkish economy all together raise the production costs; thus affecting the economic growth in North Cyprus negatively. High production costs in factor markets make production of goods and services insufficient and diminish the productivity of labor and capital. However, foreign trade and budget deficit of the country is widened and the problem of price instability is added to these unfavorable economic conditions, putting the growth and stability of North Cyprus' economy into a dead end. This situation is known to be a problem for many developing countries. North Cyprus is not only a developing country, but it is also a country grappling with political problems with a small island economy characteristics. Therefore, in order to ensure stable economic growth, policies to be implemented should be shown much more sensitivity than it should be.

Achieving sustainable growth is very important for the future of countries and this requires the use of strong monetary and fiscal policies. In North Cyprus, the Central Bank is not equipped to implement necessary monetary and exchange rate policies, and thus the economy results in a lack of important monetary policy instruments. Ensuring price stability is therefore completely tied to economic indicators in Turkey. Although determining the interest rates and the money supply entirely depends on Turkey's economy, the Central Bank of North Cyprus has a critical role in the regulation and supervision of banks and financial institutions. However, due to a lack of monetary policy instruments and the unrecognized status as an independent state by the rest of the world, North Cyprus cannot trade with the rest of the world directly and thus; implementing a foreign trade policy to ensure long-term economic growth and stability is difficult. The foreign

trade deficit of North Cyprus' economy in times of crisis in Turkey has further widened, and this gap is particularly evident from the exchange rate fluctuations occurred (Kalmaz and Giritli, 2018).

Figure 1. below shows the real GDP in North Cyprus between the period 1990-2018, based on 1977 prices (million TL). As it is seen from the severe fluctuations in every 10 years, it is inevitable that the country's economy has grown steadily over the years. Although these impulsive fluctuations in economic growth recorded in every 10 years is due to many different reasons, it is closely related to macro-economic instabilities in Turkey.



Source: State Planning Organization, Economic and Social Indicators

Figure 1. Economic Growth in TRNC between 1990-2018

Investment expenditures, which are the basis of economic growth, cannot be effective in a risky environment and can result in a production below the potential GDP. In developing countries, financial sector has always been a potential component in achieving economic growth. (Schumpeter, 1911) reveals that developments in the financial sector, especially in the banking sector, play a crucial role in stabilizing economic growth. According to Levine (2004), financial

development, financial instruments, financial markets and financial intermediaries are resulted by reducing the cost of obtaining information. (Demetriades and Luintel, 1996) examined the effects of various types of banking sector controls on the process of financial deepening in India, and found that banking sector controls by the Reserve Bank of India influence financial deepening negatively. In North Cyprus with a political recognition problem, the importance of the development of financial instruments has become more apparent in order to reduce costs and enable production. Figure 2 shows the distribution of total investment and total consumption expenditures in GDP between 1990 and 2018. As can be seen in the figure, the share of investments in GDP has been gradually decreasing especially in the last 10 years, and the country's economy is transforming into an economic structure based on consumption. This situation causes structural problems in the economy.

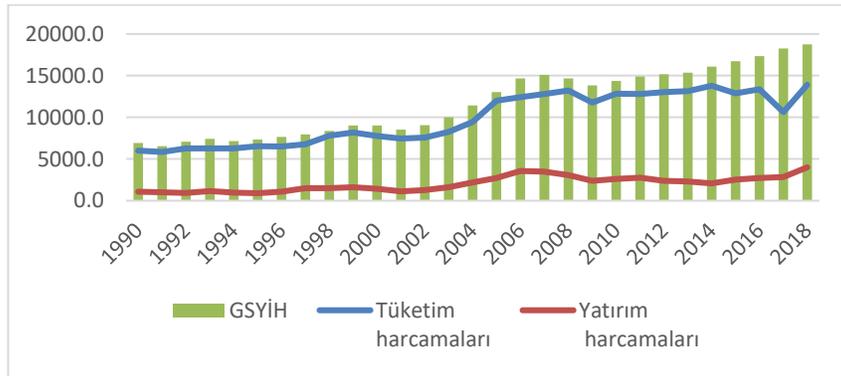


Figure 2. Shares of Total Investment and Consumption Expenditures in GDP

In this study, the aim is to show how developments in the financial sector affect the economic growth in order to produce policies that will contribute to the growth of the North Cyprus economy. One of the factors that should not be ignored is the contribution of the universities to the

country's economy. There are 20 universities in North Cyprus as of 2019 according to YÖDAK (2019). According to 2018 data obtained from the State Planning Organization, higher education institutions have a significant 35 percent share in GDP. Data from the same source shows that the number of students reached 102,944 in the 2018-2019 academic year. In a country with a population of 374,299, students in higher education institutions correspond to 28 percent of the total population, where 88 percent of the students enrolled in higher education institutions are from abroad and 53 percent of this rate belongs to students from Turkey. Figure 3 below gives the distribution of students registered in higher education institutions based on their origin.

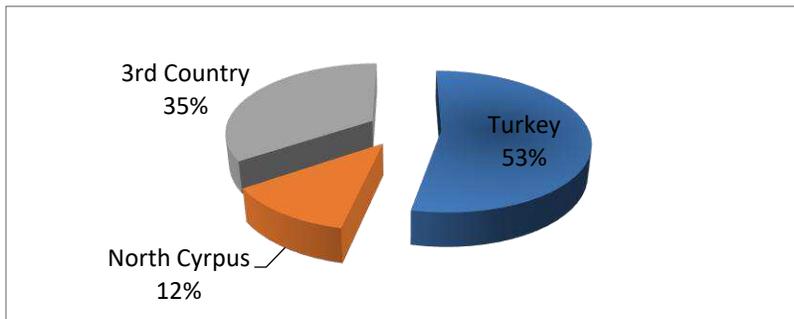


Figure 3. Distribution of Higher Education Students by Nationality in 2018-2019 Academic Year

Considering that universities affect the country's economy in all areas via a multiplier effect, the number of students in higher education institutions is added to our analysis. At this point, our study differs from other studies in the literature by capturing the multiplier effect of the students in higher education; while at the same time the econometric analysis method used in our study consists of new techniques. In this context, our work will benefit the legislators in ensuring

stable growth of the country's economy, and it will contribute to the economic literature. In our study, we focused on (1) the impact of financial developments on economic growth, (2) the multiplier effect of the higher education sector on economic growth, and based on the findings, recommendations are made to achieve a stable economic growth in line with the results achieved.

LITERATURE REVIEW

The importance of the relationship between financial development and economic growth is of great interest in both growth and finance literature, as the financial sector in countries' economies is always a potential component in achieving economic growth. Therefore, the literature examining the relationship between developments in the sector and economic growth is quite broad. In the study of (King and Levine, 1993) and Levine (1997), financial development influenced a country's economic development positively and they have shown that the new era in the system contributes to economic growth. Investigating the relationship between financial development and economic growth, (Schumpeter, 1911, Kuznets 1955 and Patrick, 1966) expressed different opinions on the relationship between financial sector development and economic growth. In this study, according to Schumpeter's financial development-economic growth paradox, in an advanced financial system developed with technological innovations, resources are distributed from less efficient to more productive sectors while Kuznets argued that financial markets start to grow as the mid phase of the economic growth process is approached, and the financial system develops as the economy is matured. However, Lewis (1956) argued that

there is a two-way relationship between financial development and economic growth, and such a relationship was supported by Patrick (1966). However, Lewis (1956) found that financial markets develop as a result of the economic growth process, while (David et al., 2014) suggests that financial integration is an important channel in financial development in countries where institutionalization is at a higher level. (Mishra and Narayan, 2015), in a study conducted for 43 developed and developing countries, revealed that financial development positively (negatively) affects the growth as long as the financial development level of a country is above (below) cross-sectional averages. (Raider et al., 2014) investigated the link between financial development and economic growth in OECD member countries using unbalanced panel cointegration and causality analysis from 1980-2011. The result of the Granger causality analysis shows a one-way causality relationship between economic growth and financial development, while showing a two-way relationship between broad money and economic growth. The findings of (Rousseau and Wachtel's, 2000) in a study for 47 countries reveals that the intensity of activity in traditional financial intermediaries plays a leading role in economic growth. Study by (Calderon and Liu, 2003) using the Geweke Decomposition test on pooled data of 109 developing and industrial countries from 1960 to 1994, analyzed the direction of causality between financial development and economic growth and findings suggest that financial development generally leads to economic growth. Furthermore, the Granger causality from financial development to economic growth and from economic growth to financial development coexist and financial deepening contributes more to the causal relationships in developing countries than in industrialized countries. (Christopoulos

and Tsionas, 2004) investigated the long run relationship between financial depth and economic growth via panel unit root tests and panel cointegration analysis. Their findings suggest that there is a single equilibrium relation between financial depth, growth and ancillary variables and the cointegrating relation implies unidirectional causality from financial depth to growth. (Yuc at al., 2011) in their recent study analyzed the role of financial development in accounting for economic growth in low -and middle- income countries classified by geographic regions. Their panel data-based research provides a positive relationship between financial development and economic growth in developing countries. In this study, short-term multivariate analysis provides a two-way causality relationship between finance and growth for most regions and one-way causality from growth to finance for the two poorest regions. Furthermore, trade and government expenditures play an important role in explaining economic growth.

Financial development means improving financial services by increasing efficiency in the financial sector. Improved quality and depth in the financial sector lead to growth in existing funds and drive savings to productive opportunities. This is a positive element in achieving sustainable economic growth. The financial system in North Cyprus shows the characteristics of a bank-based financial structure. Hence the economy has a fragile structure as a result of the lack of monetary policy tools to stabilize it as in other countries.

Albeit the relationship between financial development and economic growth is being investigated using a variety of methods in literature, no study has been conducted to reflect this unique situation in North Cyprus' economy. This study investigates how financial development

affects economic growth, including the multiplier effect of the impact of higher education. In the literature search for North Cyprus, (Tursoy and Faisal, 2018) examined the paradox of financial development and economic growth by using inflation as a regressor in their study. The study analyzed the relationship between financial development and economic growth using ARDL method by using the total deposits of banks as an indicator of financial depth. The conclusion is that, a strong financial structure positively affects economic growth in North Cyprus. According to the data from the State Planning Organization of North Cyprus, while the increase in the number of students in higher education institutions positively affects higher education incomes, it is observed that every student increases the use of physical capital, telephone, internet, service sector and financial institutions. While the positive developments in the education sector and the multiplier effect it has created on the financial markets undoubtedly have a locomotive effect, this also affects economic growth positively.

DATA SET AND METHODOLOGY

This study reinvestigates the impact of financial development on economic growth including the moderating role of education sector under consideration in North Cyprus by employing time series data covering the years between 1990 and 2018. The series of our dependent variable economic growth indicator gross domestic product (GDP) calculated in real terms, and one of the independent variables which is the number of students enrolled in the higher education institutions are obtained from the State Planning Organization¹ for the years between 1990 to 2015,

¹State Planning Organization (WTO)(2019)), <http://www.devplan.org/>

while the data for those variables for the years from 2016 to 2018 are gathered from the Central Bank^{1 2} database. The data of real GDP is based on 1997 prices in TL. The data of M3 and the total receivables as the money supply and the data of financial depth indicators respectively are collected from the database of the Central Bank of North Cyprus. M3 constitutes the wider definition for money supply including the cash and checking deposits, savings deposits, money market securities, mutual funds, time deposits, institutional money market funds, short-term repurchase agreements and larger liquid assets. In econometric analysis, we used the share of both money supply and financial depth series in GDP, while the logarithmic transformation of the real GDP and the number of students enrolled in the higher education institutions are taken. Equation (1) given below represents the model used in empirical analysis;

$$\ln GDP_t = \beta_0 + \beta_1 FD_t + \beta_2 M3_t + \beta_3 \ln HE_t + \varepsilon_t \quad (1)$$

where Real GDP, which is a dependent variable in Equation (1), is represented by GDP, while the independent variables financial depth, money supply and the number of students enrolled in higher education institutions are denoted by FD, M3 and HE, respectively. β_0 is the constant and $\beta_1, \beta_2, \beta_3$ are the estimated long-term coefficients attached to independent variables. Ln

¹TRNC Central Bank (2002), Annual Report,
<http://www.kktcmerkezbankasi.org/sites/default/files/yayinlar/sureli/kktcmbfr2002.pdf>

² TRNC Central Bank (2002-2006), Money Supply Report,
<http://www.kktcmerkezbankasi.org/sites/default/files/yayinlar/sureli/para-arzi.pdf>

included in front of the variables to indicate that the series used were converted to logarithmic form. ε_t stands for the error term while t represents the time.

This study suggests that the number of students enrolled in higher education institutions might have a moderating role in the economic growth of North Cyprus. Specifically, the number of students enrolled in higher education institutions might moderate the effects of the financial development indicators on the economic growth of North Cyprus in addition to having a direct effect. The moderating effects are represented by Figure 4 below and tested by introducing interaction variables (Cohen and Cohen, 1983), similar to the work of (Chen and Myagmarsuren, 2013).

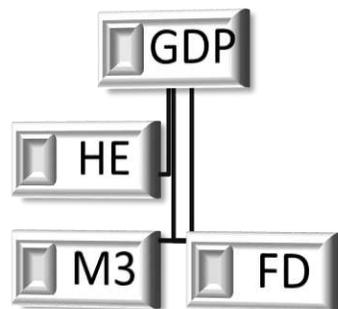


Figure 4. Estimation Model

In order to take into account the moderating role of the number of students enrolled in higher education institutions and further to solve the omitted variable problem, Equation (1) is reorganized as represented by Equation (2) below.

$$\ln GDP_t = \beta_0 + \beta_1 FD_t + \beta_2 M3_t + \beta_3 \ln HE_t + \beta_4 FD_t * \ln HE_t + \beta_5 M3_t * \ln HE_t + \varepsilon_t \quad (2)$$

If the interaction variables in Equation (2) are statistically significant, the existence of the moderating role of the number of students enrolled in higher education institutions is confirmed (Cohen and Cohen, 1983).

Econometric analysis starts with the stationarity check of the series used in estimations, since the first attempt for the econometric analysis starts with the test for stationarity of the variables as non-stationarity of the data generates spurious regression analyses (Granger and Newbold, 1974). After estimating the level of integration of the variables, the presence of cointegration among variables is tested. Empirical analyses are carried with the long-run estimation of the impact of independent variables on economic growth. Breusch–Godfrey serial correlation LM test, the RESET test of Ramsey's, and the heteroscedasticity diagnostic tests are employed to be able to confirm that our empirical analyses are reliable to develop policy strategies to promote economic growth. Moreover, we applied CUSUM and CUSUM-SQ tests to examine the long run coefficient stability. Furthermore, Fully Modified Ordinary Least Squares (FMOLS) and Dynamic Ordinary Least Squares (DOLS) are employed for a robustness check. The direction of the relationship among variables in the short-run is tested by the Toda-Yamamoto causality test.

EMPIRIC RESULTS

1. Unit Root Analysis

(Zivot and Andrews, 1992) unit root test which allows for a structural break is employed to determine the level of integration of the series in the model where the delay length is determined by Akaike Information Criteria (AIC). The unit root test results of the variables are represented by Table 1 given below.

Table 1. Zivot-Andrews Unit Root Test Results

Zivot-Andrews		
Variables	Level	First Difference
lnGDP	-4,802	-5,269**
FD	-5,302**	-----
M3	-5,425**	-----
lnHE	-3,699	-6,641***

***, ** and * denotes the statistical significance at the 1%, 5% and 10% levels respectively.

As can be seen from Table 1, GDP and HE variables are stationary at the first deference, I(1), while FD and M3 are stationary at level I(0). In case where the series are stationary at mix levels being either I(1) or I(0), it was appropriate to establish ARDL approach based bounds cointegration test to test for cointegration among the variables.

2. BOUNDS TEST

There are several methods used in economic literature applied to test for the presence of co-integration among variables when all variables studied are integrated at same level, all being I(1) such as (Engle-Granger, 1987; Johansen, 1988 and Johansen-Juselius, 1990) co-integration tests to determine if the variables have a long run relationship. When variables are integrated at mix levels as in our study, bounds test of (Pesaran et al., 2001) is appropriate to be established to test for the long run co-integration relationship among the variables. In addition to being applicable for the cases where series are integrated at mix levels, Bounds test also has the advantages of being relatively more robust even for small samples and generating estimates to be unbiased for the long-run model Narayan (2004). The model for the ARDL approach-based Bounds test is represented by Equation (3) as follows;

$$\begin{aligned} \Delta \ln GDP_t = & \alpha_0 + \sum_{i=1}^p \alpha_{1i} \ln GDP_{t-1} + \sum_{i=0}^p \alpha_{2i} FD_{t-1} + \\ & \sum_{i=0}^p \alpha_{3i} M3_{t-1} + \sum_{i=0}^p \alpha_{4i} \ln HE_{t-1} + \varepsilon_t \end{aligned} \quad (3)$$

where the long-run coefficients of the variables are denoted by α 's, while ε_t represents the error term. Bounds test follows F distribution and null hypothesis indicates that the long-run coefficients attached to the variables are equal to 0. The critical values for the test are developed by (Narayan and Narayan, 2005). If the test statistic is below the lower bound critical value null hypothesis is not rejected, while if the test statistic is above the upper bound critical value, null hypothesis is rejected which confirms a long-run relationship among variables. Another possibility is that the

test statistic falls in between the lower and upper bound critical values which results as inconclusive. In such a case, co-integration should be tested by applying another method.

Bounds test for co-integration is applied considering five different cases; first with intercept and trend, second with restricted intercept and without trend, third without deterministic unrestricted intercept and without trend, fourth with deterministic unrestricted intercept and restricted trend, and fifth with unrestricted intercept and restricted trend. Since the last three cases generate more reliable results, we considered only those three cases in our analysis. Table 2 given below summarizes the bounds test results.

Table 2. Bounds Test Results

Without deterministic unrestricted intercept and without trend	Wth deterministic unrestricted intercept and restricted trend	With unrestricted intercept and restricted trend	Result
F_{iii}	F_{iv}	F_v	H_0
8.17***	7.51***	9.46***	Reject

***, ** and * denotes the statistical significance at the 1%, 5% and 10% levels respectively.

As can be seen from Table 2, since according to the bounds test results of all 3 cases the F test statistics are above the F critical values of the upper bounds obtained from (Narayan and Narayan, 2005), we reject the null hypothesis of no co-integration at 1% significance level,

concluding that there is a co-integration relationship between the series in the long-run. Our study continues with the estimation of the long-run impact of independent variables on economic growth.

3. The Long-Term Relationship Between Variables

The long-run individual impact of the independent variables and the moderating role of the number of students enrolled in higher education institutions on the economic growth of North Cyprus are estimated through the ARDL model. As robustness check of the ARDL estimates, we also estimated FMOLS (Fully Modified Ordinary Least Squares) model which is a non-parametric approach allowing for serial correlation of the series and DOLS (Dynamic Least Squares) model, which provides the advantage to produce reliable results coping with the order of integration problem of the series by including lags and leads and being applicable no matter if co-integration exist among the series. The findings of the estimated coefficients using ARDL, DOLS and FMOLS methods are represented by Table 3 below.

Table 3. Long Term Coefficients

Dependent Variable: LNGDP

	ARDL	DOLS	FMOLS
lnFD	3.803610***	3.803610***	5.233954***
lnM3	-2.613783**	-2.613783***	-3.585359**
lnHE	0.373641***	0.373641**	0.463946***
lnFD* lnHE	-0.377132***	-0.377132***	-0.518615***
lnM3* lnHE	0.265492**	0.265492***	0.364699***

***, ** and * denotes the statistical significance at the 1%, 5% and 10% levels respectively.

The ARDL estimates suggest that 1% development in the financial sector improves economic growth by 3.8%, 1% increase in the money supply worsens economic growth by 2.6% and 1% increase in the number of enrolled students in higher education institutions increases economic growth by 0.4%. In addition, the moderating role that the number of enrolled students in higher education institutions on economic growth through financial markets is confirmed at significance levels 1% and 5% under the estimation of different models. It is seen from Table 3 above that DOLS and FMOLS estimates also confirm the results obtained by applying the ARDL model.

4. Toda-Yamamoto Causality Test

Our study continues with the investigation of the causality relationship between variables through employing Toda-Yamamoto causality test. The test developed by (Toda and Yamamoto, 1995) is the modified version of the traditional Granger Causality test which is a VAR model for the variables in levels (Rufael, 2004; 2005; Zapata and Rambaldi, 1997) as given below by Equation (4a) and Equation (4b);

$$X_t = \alpha_0 + \sum_{i=1}^{k+d \max} \alpha_1 X_{t-i} + \sum_{i=1}^{k+d \max} \alpha_2 Y_{t-i} + \mu_1 \quad (4a)$$

$$Y_t = \alpha_0 + \sum_{i=1}^{k+d \max} \alpha_1 X_{t-i} + \sum_{i=1}^{k+d \max} \alpha_2 Y_{t-i} + \mu_2 \quad (4b)$$

where X_t and Y_t represent the variables examined for causality while k denotes the lag length and $d \max$ determines the order of the integration. μ_1 and μ_2 express the error term. The

length of delay detected by AIC is 2. The results of the Toda-Yamamoto causality test are represented by Table 4 below.

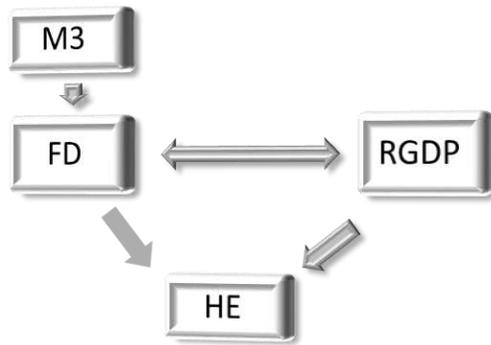
Table 4. Toda-Yamamoto Causality Test Results

	lnGDP	FD	M3	lnHE
lnGDP	-	5.915*	0.078	6.970**
FD	6.942**	-	1.483	8.639**
M3	3.138	26.312****	-	0.099
lnHE	0.411	3.282	0.385	-

****, ** and * denotes the statistical significance at the 1%, 5% and 10% levels respectively.

Toda-Yamamoto (1995) causality tests results confirm the presence of a bidirectional causality between financial depth and economic growth, and unidirectional causality running from money supply to financial depth, from economic growth to financial depth and from financial depth to the number of students enrolled in higher education institutions. We can conclude that economic growth and financial depth causes the number of students enrolled in higher education institutions. Figure 5 below summarizes the causal relationship between variables.

Figure 5. Toda-Yamamoto Causality Test Results



Empirical analysis is followed by the diagnostic check for the estimations by employing Lagrange Multiplier test for serial Correlation, Breusch–Pagan–Godfrey for heteroscedasticity, Ramsey's RESET test and normality test for the ARDL model estimates. Furthermore, long-run estimates stability are tested by CUSUM and CUSUMSQ tests. The test results of diagnostic and stability check are represented by Table 5 below.

Table 5. Diagnostic Tests Results

Table 5. Structural Test Results

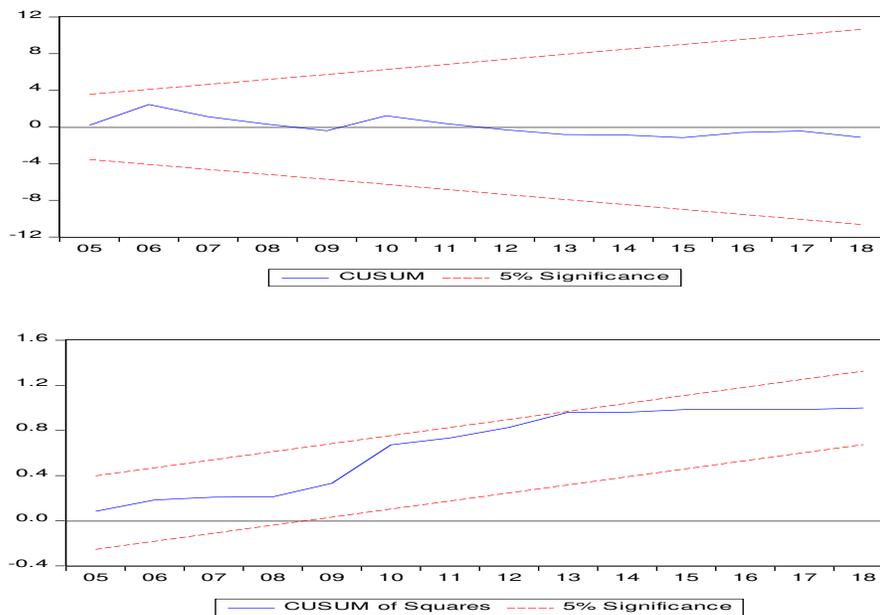
	Diagnostics Testler
Serial Correlation (LM Test)	0,55
Normality Test (Jarque Bera)	1,741
Ramsey Reset Test	0,43
Heteroscedasticity Test (Breusch-Pagan-Godfrey)	1,26

	CUSUM - CUSUMSQ Tests
Cusum Test	5% Significant
CusumSq Test	5% Significant

*, ** and *** respectively 1%, 5% and 10% reliability.

Diagnostic test results confirmed that ARDL model estimates are free from misspecification, serial correlation and heteroscedasticity problems and the parameters are confirmed to be stable. Moreover, CUSUM and CUSUMSQ tests plots fluctuate inside the five percent critical bounds interval, confirming the stability of the long-run estimates at 5% significance level as represented by Figure 6 below.

Figure 6. CUSUM and CUSUMSQ Tests



CONCLUSIONS AND SUGGESTIONS

In this study, we investigated how the financial development affects economic growth through a multiplier effect of higher education in North Cyprus. The econometric model with various assumptions tested the presence and direction of the relationship. As stated in the literature review, although the relationship between financial development and economic growth has been investigated using different models and assumptions, no studies have examined the multiplier effect of the number of students affecting economic growth through financial activities in North Cyprus.

While the independence of North Cyprus is not recognized by countries other than the Republic of Turkey, both production and international trade sectors are adversely affected, while there are many students from different countries studying at universities. In particular, the number of students of African descent is increasing each year, and most of these students do not return home without graduation. These students are employed in a variety of part-time sectors, both during the school year and during the summer. While this situation affects both product and factor markets positively, the added value created in the financial and financial institutions sectors increases. The increase in the number of students in North Cyprus also increases the stock and circulation of foreign currencies.

In the econometric model used in our study, the multiplier effect of the number of students was added to the model as the interaction variable; and according to the results, it was observed that the increase in the financial development and the number of students had a positive contribution to the economic growth, whereas the increase in money supply had a negative effect on the economic growth. It is not unexpected that the increase in money supply will negatively affect economic growth in North Cyprus. Normally, the increase in money supply leads to a decrease in nominal interest rates and to an increase in investment expenditures with a reduction in the cost of investments. Increasing investments increase the aggregate demand and thus increase the national income of the countries; both full employment and money stability are ensured. In order to ensure macro-economic stability, the combined and effective use of monetary and fiscal policies is extremely important. As the Central Bank of the TRNC is unable to channel the savings through investments through financial institutions by controlling interest rate, rediscount rate and open market transactions and channeling the savings through investments, the increase in money supply affects the total demand rather than investments (Figure 3). This situation leads to a decrease in the national income level and to an increase in demand inflation.

When we look at the impact of the change in money supply on economic growth together with the multiplier effect of the increase in the number of students, the result was as expected. The students coming to North Cyprus have a multiplier effect on financial markets and affect economic growth positively. As summarized in Figure 2, while economic growth and financial development

lead to an increase in the number of students, a significant and bi-directional relationship between economic growth and financial development is determined.

Financial development is not limited to providing macro-economic stability by keeping the money market under control by using the central bank's tools correctly. Banks and financial institutions should be encouraged to transform the resources/savings they have into investments, to provide investment opportunities and to increase the production of goods and services by providing appropriate credit facilities. Although the political situation in North Cyprus makes it difficult to stabilize its economic activities, sustainable growth can be achieved in our country with the support of the state.

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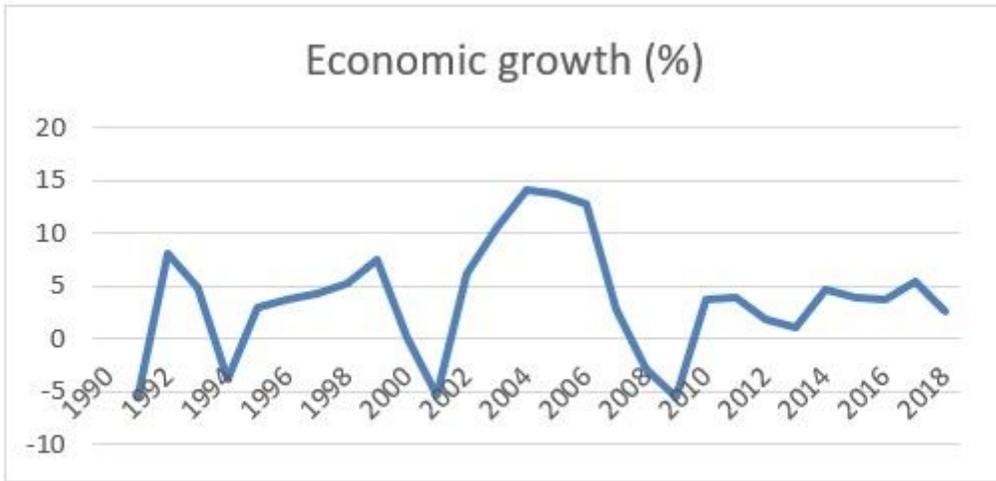
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Figures



Source: State Planning Organization, Economic and Social Indicators

Figure 1

Economic Growth in TRNC between 1990-2018

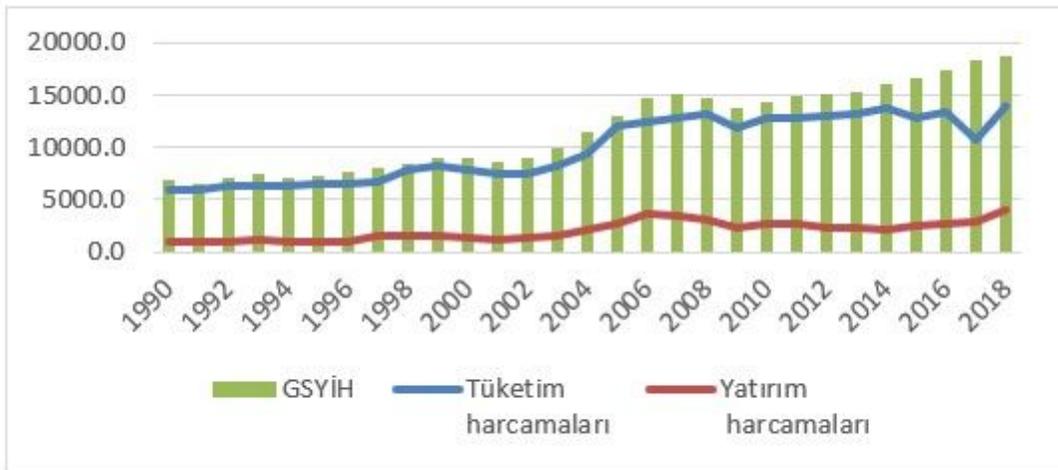


Figure 2

Shares of Total Investment and Consumption Expenditures in GDP

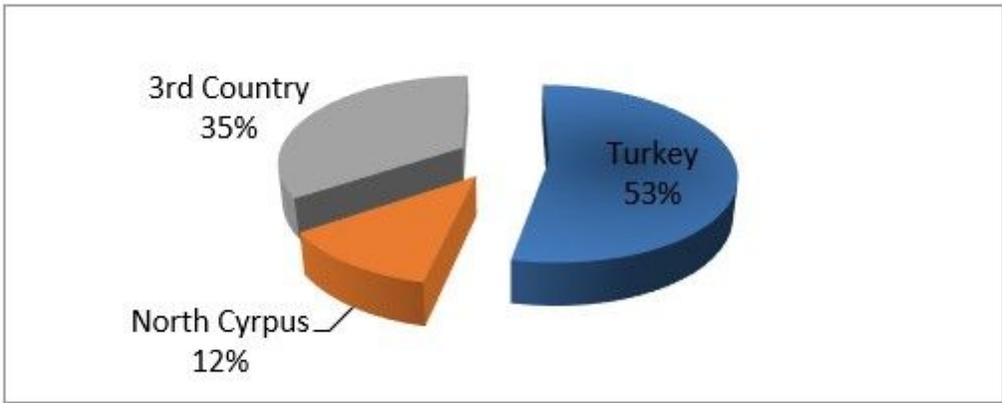


Figure 3

Distribution of Higher Education Students by Nationality in 2018-2019 Academic Year

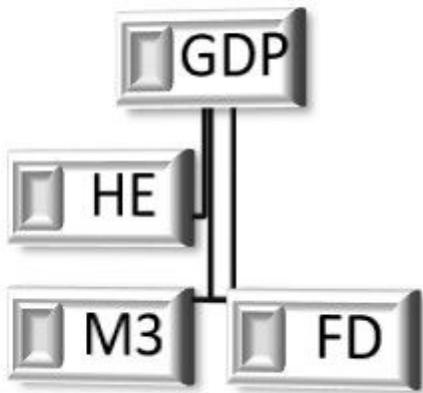


Figure 4

Estimation Model

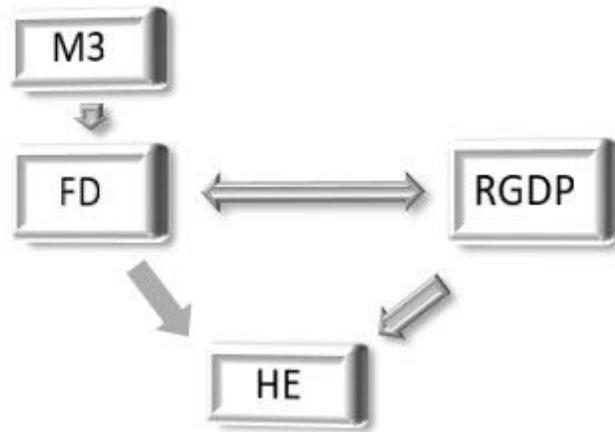


Figure 5

Toda-Yamamoto Causality Test Results

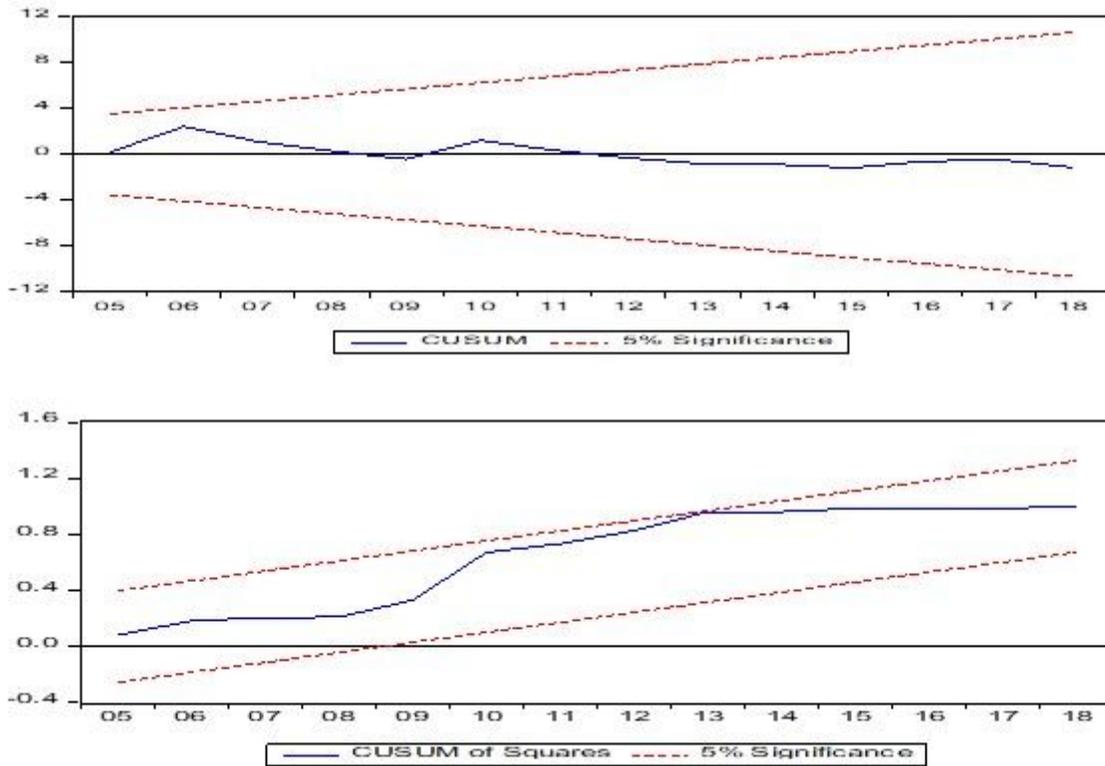


Figure 6

CUSUM and CUSUMSQ Tests