Premium e-Journal of Social Sciences

Premium Sosyal Bilimler E-Dergisi
Uluslararası Hakemli Dergi- International Refereed Journal
ISSN: 2687-5640

Received / Makale Geliş Tarihi 18.06.2024
Published / Yayınlanma Tarihi 30.09.2024
Volume (Issue) Cilt (Sayı) 8 (46)
pp / ss 1167-1176

Research Article /Araştırma Makalesi
10.5281/zenodo.13881605
Mail: editor@pejoss.com

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ROR Id: https://ror.org/04wy7gp54

The Nexus Among Financial Development and Youth Unemployment: An Empirical Approach

Finansal Gelişme ile Genç İşsizlik Arasındaki Bağlantı: Ekonometrik Bir Yaklaşım

ABSTRACT

The employment of individuals is a very important issue for both the individual and society. It is therefore essential that those who are actively engaged in the workforce are guaranteed the opportunity to participate in the labor market, thereby preventing the formation of social classes and divisions. Young people, who are the guarantee of the future of a country, are among the most vulnerable groups in terms of labor employment. This situation increases the importance of youth unemployment. In a context of accelerated globalization, financial developments that enhance output, production, and consumption play a pivotal role in the economic and social advancement of nations. Therefore, the aim of this study is to reveal the nexus between financial development and youth unemployment in the Türkiye's sample. Due to data limitations, the study covers the period from 1988 to 2021. The findings of the study, which employed the ARDL method, indicate that financial development has a significant negative impact on youth unemployment during the specified period.
Keywords: Financial development, Youth unemployment, ARDL

ÖZET

Bireylerin istihdam edilmesi hem bireyin kendisi hem de toplum açısından oldukça önemli bir konudur. Bu nedenle, aktif olarak işgücüne katılanlara işgücü piyasasına katılma fırsatının garanti edilmesi ve böylece sosyal sınıfların ve bölünmelerin oluşmasının önlenmesi esastır. Bir ülkenin geleceğinin teminatı olan gençler, emeğin istihdamı konusunda en kırılgan kesimlerin başında gelmektedir. Bu durum genç işsizliği konusunun önemini artırmaktadır. Hızla küreselleşen dünyada çıktı üretimini ve tüketimi artıran finansal gelişmeler ülkelerin ekonomik ve sosyal gelişiminde önemli rol oynamaktadır. Dolayısıyla bu çalışmanın amacı, Türkiye örnekleminde finansal gelişme ile genç işsizlik arasındaki bağlantıyı ortaya koymaktır. Çalışma veri kısıtı dolayısıyla 1988-2021 dönemi kapsamaktadır. ARDL yönteminin kullanıldığı çalışmanın bulguları, finansal gelişmenin belirtilen dönem boyunca genç işsizliği üzerinde önemli bir negatif etkiye sahip olduğunu göstermektedir.
Anahtar Kelimeler: Finansal gelişme, Genç işsizlik, ARDL

1. INTRODUCTION

The opening sentence of Wolfgang Franz's (1982) study on youth unemployment reads as follows: "One of the most important labor market problems of the 1970s was the relatively high and increasing unemployment rate of young people compared to the adult members of the labor force." The acceleration of the globalization process and the concomitant strong changes in trade, production methods, and technology have resulted in the emergence of unemployment as one of the world's most significant problems. The impact of this change is particularly pronounced among young people. Indeed, an analysis of global databases reveals that youth unemployment in a given country is, on average, approximately two to three times higher than total unemployment.

The issue of youth unemployment represents a significant challenge faced by a multitude of developed and developing countries. It is estimated that over 75 million young people are currently seeking employment on a global scale. The International Labor Organization (ILO) has indicated that the growth in inactivity and the prevalence of precarious work are contributing to the emergence of a vulnerable cohort of young workers (Hajdu, 2014, p. 27). Of the 75 million young people who were unemployed in 2021, approximately 8.6% (6.5 million) were in low-income countries, approximately 48% (36 million) in lower-

middle-income countries, approximately 33% (24.9 million) in upper-middle-income countries, and approximately 10.3% (7.7 million) in high-income countries. In Türkiye, the corresponding figure was approximately 22.3% (ILO, 2022, p. 42).

A study conducted by the World Economic Forum has identified the problem of youth unemployment as one of the most significant economic and social challenges of our time. Moreover, experts posit that this situation may also impede sustainable economic growth processes (Rakauskiene & Ranceva, 2014, p. 166). Furthermore, it is evident that the issue of youth unemployment can result in a sustained decline in human capital and earnings, as well as an escalation in poverty, violence, and social inequality to unfavorable levels (Fitzenberger et al., 2015, p. 352). As a consequence of their lack of professional experience, insufficient education, limited social protection, and precarious working conditions, young people are particularly vulnerable (Mills & Blossfeld, 2006, p. 8; Arco-Tirado et al., 2021, p. 52). In periods of economic downturn, young workers are frequently the initial group to be marginalized from the labor market, largely due to their relative lack of experience and professional networks. It is therefore evident that social and economic policies are required in order to address the issue of youth unemployment. In this context, it is of devastating importance to consider the financial developments regarding the employment of young people.

In general, the term "financial development" is defined as the increase of financial markets, financial instruments, financial transaction volume, and the growth of financial institutions (Açdoyuran & Kılıç, 2018, p. 1114). Financial development with respect to the labor market, can serve to reduce unemployment by diminishing the opportunity cost of resources allocated to employment (Chen et al., 2021, p. 3). Furthermore, financial development can result in adverse outcomes, such as increased wealth disparities and constrained access to labor market resources for younger individuals. Conversely, it can facilitate access to financial opportunities, enabling younger individuals to secure credit, establish their own businesses, and invest in their personal development (Bbaale, 2014, p. 43). Moreover, young people who establish their own businesses can achieve financial independence and create new employment opportunities. Furthermore, it can contribute to various sectors, including production, distribution, food, and services, in terms of public benefit (Ezekoye, 2014, p. 369). Such processes can occur in all countries. In order for Türkiye to achieve economic development, it is essential to prioritize the enhancement of employment and labor productivity. Given the country's potential to foster these conditions, it is a crucial step in realizing its economic growth.

The Türkiye's economy is that of a developing country, yet the geographical and political circumstances that prevail in the country present significant challenges to the creation of new business fields and employment opportunities. This situation is a consequence of the inability to mobilize savings and investments, which further exacerbates the risk of long-term youth unemployment. Accordingly, this study examines the influence of financial development on youth unemployment in Türkiye over the 33-year period from 1988 to 2021. In order to represent financial development, this study has selected the financial development index and the ratio of bank loans to GDP, which are frequently used in the literature. The study is limited by the fact that the most recent data on the financial development index is from 2021, and the youth unemployment data begins in 1988. One of the primary considerations in the presentation of this study is the limited examination of the nexus between financial development and youth unemployment in the economic literature.

2. REVIEW OF RELATED LITERATURE

There are two theoretical approaches to the impact of financial development on labor markets. The first theory argues that financial development has a dampening effect on unemployment. In such financial markets, credit constraints are less and access to credit becomes easier. This enables firms to invest and create employment (Acemoglu, 2001; Wasmer & Weil, 2004). Another theoretical perspective is credit market imperfections. According to this perspective, financial markets suffer from asymmetric information and credit constraints. This makes it difficult for firms to invest and create employment. It increases the problem of access to credit, especially for young entrepreneurs, and prevents the development of new investment and job opportunities (Raifu et al. 2024). In sum, by facilitating access to credit, financial development can enable firms to invest responsibly and create jobs. However, imperfections in the credit market can limit this effect. Therefore, the impact of financial development on unemployment is a complex issue.

In general, the majority of empirical studies appear to support the first theory. In the economic literature, the nexus between financial development and unemployment has been primarily analyzed in the context of general unemployment. Conversely, the nexus between financial development and youth unemployment has been analyzed in a limited number of studies. In the context of youth unemployment, Raifu et al. (2024), on which the model of this study is based, examined the nexus between financial development and both youth and general unemployment, with gender dimensions, in 19 MENA countries between 1991 and 2019. The results of the study suggest that financial development has a strong negative impact on unemployment across quantiles according to the panel quantile with the moment method, but the effect decreases as we move from lower to upper quantiles. Moreover, a unidirectional causality is found from the financial development index to youth unemployment. In a recent study, Emekaraonye et al. (2023) examined the impact of rural bank lending on youth unemployment in the context of financial development in Nigeria between 1992 and 2021. The study's findings indicate that bank loans to the private sector have a significant positive impact on reducing youth unemployment. Ayasi et al. (2019) employ data from 143 countries between 1995 and 2015 to examine the influence of financial capital on the labor market. The study finds a positive relationship between productivity and access to financial institutions and employment rates. In addition, it is determined that as financial depth and efficiency increase, youth employment also increases. On the other hand, the study also found that financial development had a negative impact on employment during the 2008 global financial crisis. Another study is Borsi (2018), conducted an investigation into the impact of credit contraction on labour market performance in 20 OECD countries over the period 1980–2013. The local projection estimation method was employed to ascertain that a reduction in private credit results in an increase in the overall, youth, and long-term unemployment rates. The impact of credit contraction on youth unemployment is more pronounced than on total and long-term unemployment. In contrast to the preceding studies, Fatokun et al. (2023) employed data from the period 1991-2021 in Nigeria and identified a long-run cointegration relationship between bank loans and youth unemployment. Nevertheless, they were unable to ascertain a statistically significant effect of loans on youth unemployment.

As previously stated, the nexus between financial development and unemployment is primarily examined in the context of general unemployment. Among these studies, between 1990 and 2020, Afonso & Blanco Arana (2023) investigated the nexus between the labour market and financial development in OECD nations. The application of a random effects model yielded the conclusion that an enhance in market capitalization and the volume of stocks traded can decrease the unemployment rate. Similarly, the evolution of the unemployment rate is found to be significantly affected by inflation and GDP per capita growth.

Kim et al. (2018), imperfections in the credit market has a significant effect on unemployment. The authors suggest that a financial system that is more focused on the market may be able to reduce unemployment by providing a wider range of people with access to financing and investment opportunities. Dao & Liu (2017) demonstrates that the relaxation of financial constraints exerts a more pronounced influence on job creation in firms situated in developing countries. Kanberoğlu (2014) examines the nexus between financial sector development and unemployment in the case of Türkiye. According to the findings of the study using regression analysis method for the period between 1985 and 2010, the ratio of total private sector credit to GDP and the ratio of total financial asset stock to GDP decrease unemployment, while the ratio of market stock value to GDP increases unemployment. Gatti et al. (2012) examined the relationship between the financial sector and labor market variables in 18 OECD countries. They found that the impact of the financial sector on unemployment depends on labor market conditions. The researchers found that when labor market regulation, union density, and wage negotiating power are low, rising market capitalization and falling bank concentration can result in a reduction in unemployment. Correlatively, Pagano & Pica (2012), enhanced a model to show that financial sector development promotes job creation and labour reallocation. The study revealed that financial development has a positive impact on employment, particularly in non-OECD countries. Nevertheless, the favorable impact is contingent upon the economic environment being in a favorable state.

As a different result, Chen et al. (2021) employed a system GMM analysis to investigate the nexus between financial development and unemployment in 97 countries between 1991 and 2015. Their findings suggest that excessive financial development may contribute to increased unemployment in countries with drastic labour markets. Additionally, the study indicates that financial systems based on banks or market orientation may also play a role in unemployment, particularly in flexible markets. Furthermore, the analysis indicates that credit extended to the private sector may also have a positive correlation with

unemployment in countries with rigid labour markets. In a similar result, Ogbeide et al. (2016) employed an ECM and OLS method to examine the underlying factors contributing to unemployment in Nigeria between 1981 and 2013. The results of the analysis indicate that financial development has a significant positive effect on the unemployment rate, while real GDP per capita, trade openness, and real exchange rate depreciation have a significant negative effect on the unemployment rate.

3. DATA AND METHODOLOGY

3.1. Data

This study endeavors to ascertain the influence of financial development on youth unemployment in Türkiye through time series analysis. In light of time constraints, variables were constructed based on annual data from 1988 to 2021. The data on youth unemployment begins in 1988, while the data on financial development indices concludes in 2021. The financial development index data utilized in this study were obtained from the International Monetary Fund (IMF) data set. All other data were obtained from the World Bank data set and logarithms of all data were taken.

The model established in this study, which examines the impact of financial development on youth unemployment, is based on Raifu et al. (2024):

$$lyou_t = \beta_0 + \beta_1 lfin_t + \beta_2 lcre_t + \beta_3 lgdp_t + \beta_4 lpop_t + u_t \quad (1)$$

where $lyou$ is the youth unemployment rate, $lfin$ is the financial development index, $lcre$ is the ratio of banks' loans to the private sector to GDP, $lgdp$ is GDP per capita, $lpop$ is the population and u is the error term.

Table 1: Variables and Sources

Variable	Definition	Source
lyou	Unemployment, youth total (% of total labor force ages 15-24) (national est.)	World Bank Database
lfin	Financial development index	IMF Database
lcre	Domestic credit to private sector by banks (% of GDP)	World Bank Database
lgdp	GDP per capita (constant 2015 US$)	World Bank Database
lpop	Population, total	World Bank Database

3.2. Methodology

In the analysis phase of the study, the objective is to select an appropriate model for the analysis of time series. To this end, the unit root test is initially applied to the time series in question. The most commonly utilized methodology for discerning the presence of a unit root within a stationary series is the ADF unit root test, as created by Dickey and Fuller (1981), and the PP unit root test, as developed by Phillips and Peron (1988).

The Dickey-Fuller test provides a fundamental framework for analyzing the stationarity of time series, while the augmented version of this test, the ADF test, offers a more comprehensive and detailed examination. Furthermore, the ADF test has been extended to address autocorrelation issues inherent to the series.

$$\Delta Y_t = \rho Y_{t-1} + \sum_{i=1}^{k} \beta_i \Delta Y_{t-i} + \varepsilon_t \quad (2)$$

$$\Delta Y_t = \alpha_0 + \rho Y_{t-1} + \sum_{i=1}^{k} \beta_i \Delta Y_{t-i} + \varepsilon_t \quad (3)$$

$$\Delta Y_t = \alpha_0 + \beta_t + \rho Y_{t-1} + \sum_{i=1}^{k} \beta_i \Delta Y_{t-i} + \varepsilon_t \quad (4)$$

It is asserted that the PP test yields more dependable outcomes in the presence of issues such as heteroskedasticity and weak autocorrelation. The regression equation developed for the PP test is as follows:

$$\Delta Y_t = \beta_0 + \beta_1 + Y_{t-1} + \beta_2 + (T - N\ /\ 2) + u_t \quad (5)$$

In this equation, T indicates the number of observations in the model, while u_t indicates the distribution of error terms. Here, the expected mean of the u_t error term is equal to zero (Tarı, 2010, p. 400).

In the Vector Autoregressive (VAR) model, the variables included in the model for analysis must be ordered from the most external to the most internal. In contrast to the VAR model, the ARDL model is employed to ascertain the long-term and short-term relationships, in addition to the causal nexus between the variables. The ARDL model is employed to ascertain the existence of a level between dependent and independent variables, while the cointegration nexus between these variables is determined through the

application of the Wald test (F test) (Pesaran et al., 2001). The ARDL model is preferred for its ability to be applied when the series are stationary at the level and first-degree levels, thereby producing strong estimates (Khan et al., 2019, p. 435). In this study, the equations of the model established to investigate the cointegration relationship with the ARDL bounds test are presented in Table 2.

Table 2: ARDL Equations

Long-run model	$lyou_t = \beta_0 + \beta_1 lfin_t + \beta_2 lcre_t + \beta_3 lgdp_t + \beta_4 lpop_t + u_t$
Error correction model equation	$\Delta lyou_t = \omega_0 + \sum_{i=1}^{p} \omega_{1i}\, \Delta lyou_{t-i} + \sum_{i=0}^{q} \omega_{2i}\, lfin_{t-i} + \sum_{i=0}^{r} \omega_{3i}\, lcre_{t-i} + \sum_{i=0}^{s} \omega_{4i}\, lgdp_{t-i} + \sum_{i=0}^{t} \omega_{5i}\, lpop_{t-i} + \varepsilon_t$
Short-run cointegration equation	$\Delta lyou_t = \psi + \eta_0 lyou_{t-1} + \eta_1 lfin_{t-1} + \eta_2 lcre_{t-1} + \eta_3 lgdp_{t-1} + \eta_4 lpop_{t-1} + \sum_{i=1}^{p} \omega_{1i}\, \Delta lyou_{t-i} + \sum_{i=0}^{q} \omega_{2i}\, lfin_{t-i} + \sum_{i=0}^{r} \omega_{3i}\, lcre_{t-i} + \sum_{i=0}^{s} \omega_{4i}\, lgdp_{t-i} + \sum_{i=0}^{t} \omega_{5i}\, lpop_{t-i} + \varepsilon_t$
ARDL model definiation	*ARDL(p,q,r,s,t)*
Modifications for ARDL	$\psi = \omega_0 - \Theta\beta_0$, $\eta_0 = \Theta$, $\eta_1 = -\Theta\beta_1$, $\eta_2 = -\Theta\beta_2$, $\eta_3 = -\Theta\beta_3$, $\eta_4 = -\Theta\beta_4$
Reobtaining the long-run coefficients	$\Theta = \eta_0$, $\beta_1 = -\frac{\eta_1}{\theta}$, $\beta_2 = -\frac{\eta_2}{\theta}$, $\beta_3 = -\frac{\eta_3}{\theta}$, $\beta_4 = -\frac{\eta_4}{\theta}$

Once the unrestricted error correction model of the ARDL approach has been identified, the F-test is employed to ascertain the existence of a long-term nexus. In the event that the results of the F-test exceed the critical values presented by Pesaran et al. (2001), the error correction term is incorporated into the equation for the purpose of examining the short-term relationship. If the coefficient of the error correction term is statistically significant and has a negative value, it indicates the length of time required for the variables to return to equilibrium in the long-term following a shock in the short-term.

4. EMPIRICAL RESULTS

In this study, an examination was conducted of the impact of financial development on youth unemployment in Türkiye. Initially, unit root tests were performed to ascertain the stationarity of the series.

Table 3: Unit Root Test Results

Variables		**ADF**		**PP**	
		I_0	**I_1**	**I_0**	**I_1**
lyou	c	-1.4882	-5.4394*	-1.4798	-6.2012*
	c & t	-2.6323	-5.3472*	-2.6705	-6.0298*
lfin	c	-1.7779	-5.6749*	-2.5881	-5.8410*
	c & t	-1.9301	-5.8162*	-1.5298	-9.1211*
lcre	c	-0.0688	-4.4360*	-0.1817	-4.3915*
	c & t	-1.7186	-4.3750*	-1.8083	-4.3239*
lgdp	c	0.5471	-5.9784*	1.7693	-6.2538*
	c & t	-2.3900	-5.9911*	-2.4112	-7.6330*
lpop	c	-7.6751*	-1.7951	5.2649*	-1.4286
	c & t	-4.3315**	-3.0880	-3.3217***	-2.9729

Note: *, ** and *** have defines the significance level of 1%, 5% and 10% and respectively. In addition, *c* stands for constant, and *c&t* stands for constant and trend.

Upon examination of Table 3, it becomes evident that the $lpop$ variable is stationary at its own level (I_0), while all other variables are stationary at the first difference (I_1) level. The observation that the series are stationary at disparate levels permits the implementation of the ARDL methodology for the purpose of ascertaining the potential cointegration nexus between the variables. Once a long-term relationship has been identified through the bounds test, it is possible to derive both long-term and short-term coefficient estimates. This scenario is illustrated in various models in Figure 1 below.

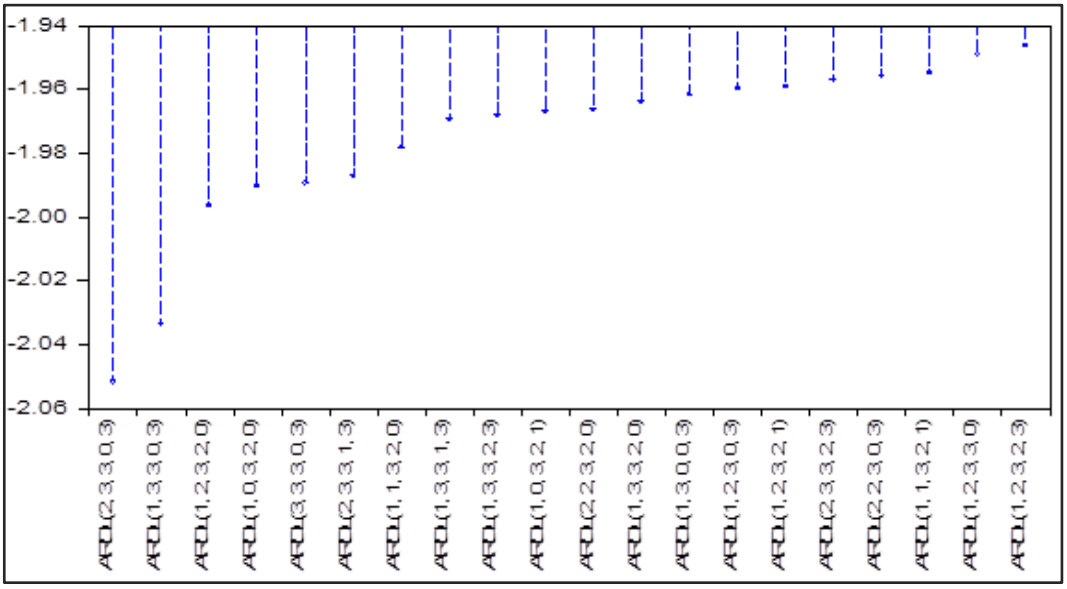

Figure 1. Akaike Information Criteria (AIC)

As illustrated in Figure 1, the (2,3,3,0,3) model, determined to be the most appropriate by the AIC, is the optimal choice. Table 4 below presents the findings of the ARDL bounds test and diagnostic test results applied in this study to determine the cointegration relationship.

Table 4: ARDL F- Bounds and Diagnostic Test Results

Functional Model	ARDL Model	k	F-Statistic	Diagnostic Tests	F-Stat.	Prob.
$lyou_t = \beta_0 + \beta_1 lfin_t + \beta_2 lcre_t + \beta_3 lgdp_t + \beta_4 lpop_t + u_t$	(2,3,3,0,3)	4	**5.015961**	**Jarque-Bera**	3.3672	0.1857
	Critical Values			**Breusch-Godfrey LM**	0.3866	0.6869
	%1	**%2,5**	**%5**	**%10**	**Heteroskedasticity BPG**	0.4550	0.9307
I_0	3.29	2.88	2.56	2.2	**Ramsey Res.**	0.7699	0.3950
I_1	4.37	3.87	3.49	3.09	**CUSUM**	Stable	
					CUSUMQ	Stable	

Note: Since the data are used at annual frequency, the lag length is taken as two according to the Akaike Information Criterion.

As illustrated in Table 4, the F-statistic value is 5.015961, as determined by the bounds test. As the observed value exceeds the upper limit of the critical value (3.49) at the 5% significance level, a long-term nexus is indicated. Moreover, the diagnostic test results indicate that probability values exceeding 0.10 suggest the absence of normality, autocorrelation, heteroscedasticity, and specification error, respectively, and that the residuals are normally distributed.

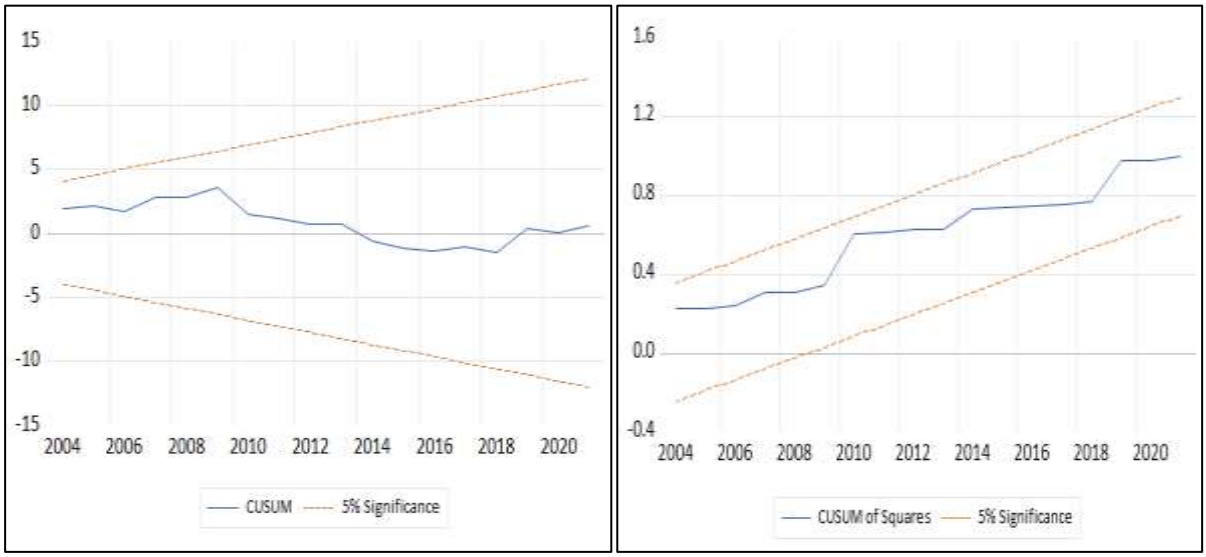

Figure 2. CUSUM and CUSUMQ Test Results

As illustrated in Figure 2, the tests demonstrate stability, thereby satisfying the requisite condition for parameter estimation of the series. Table 5 below presents the results of the ARDL model estimation for the study.

Table 5: ARDL Model Estimation Results

$lyou_t = \beta_0 + \beta_1 lfin_t + \beta_2 lcre_t + \beta_3 lgdp_t + \beta_4 lpop_t + u_t$				
Variables	**Coef.**	**St. Error**	**t-stat.**	**Probability**
lyou(-1)	0.526374	0.070141	7.504512	0.0000
lyou(-2)	-0.220390	0.081206	-2.713944	0.0160
lfin	-0.544446	0.031887	-17.07410	0.0000
lfin(-1)	0.010504	0.087259	0.120374	0.9058
lfin(-2)	-0.308978	0.072366	-4.269650	0.0007
lfin(-3)	-0.317676	0.053133	-5.978926	0.0000
lcre	0.211242	0.029615	7.132931	0.0000
lcre(-1)	-0.261902	0.032807	-7.983113	0.0000
lcre(-2)	0.326282	0.028458	11.46533	0.0000
lcre(-3)	-0.330286	0.033058	-9.991074	0.0000
lgdp	-0.293795	0.073283	-4.009036	0.0011
lpop	-0.215782	3.630136	-0.059442	0.9534
lpop(-1)	2.324702	3.363148	0.691228	0.5000
lpop(-2)	-36.67108	2.485501	-14.75400	0.0000
lpop(-3)	37.92381	2.736008	13.86100	0.0000
C	-56.37747	4.763421	-11.83550	0.0000
R^2		0.913		
ADJ- R^2		0.826		

Note: The optimal lag length is determined by the AIC.

Upon examination of the results of the (2,3,3,0,3) model presented in Table 5, it becomes evident that the R^2 coefficient, which quantifies the model's explanatory power, exhibits a value of 0.913. This result indicates that the independent variables in the model account for approximately 91% of the variation in the dependent variable. Once a cointegration nexus between the variables has been identified and a stable model established, it is possible to proceed with an ARDL model to determine the long- and short-term coefficients.

Table 6: Long-run and Short-run Estimation Results

Dependent Variable: lyou				
		Long-run		
Variables	**Coef.**	**Std. Error**	**t-stat.**	**Prob.**
lfin	-1.672291	0.138545	-12.07040	0.0000*
lcre	-0.078766	0.042684	-1.845341	0.0848***
lgdp	-0.423326	0.116676	-3.628220	0.0000*
lpop	4.843767	0.515090	9.403733	0.0000*
C	-81.23369	8.938120	-9.088454	0.0000*
		Short-run		
$\Delta lyou_{-1}$	0.220390	0.132465	1.663756	0.1169
$\Delta lfin$	-0.544446	0.173930	-3.130255	0.0069*
$\Delta lfin_{-1}$	0.626654	0.182079	3.441663	0.0036*
$\Delta lfin_{-2}$	0.317676	0.157626	2.015378	0.0621***
$\Delta lcre$	0.211242	0.104748	2.016657	0.0620***
$\Delta lcre_{-1}$	0.004004	0.106202	0.037704	0.9704
$\Delta lcre_{-2}$	0.330286	0.107111	3.083595	0.0076*
$\Delta lpop$	-0.215782	7.741149	-0.027875	0.9781
$\Delta lpop_{-1}$	-1.252730	10.01995	-0.125024	0.9022
$\Delta lpop_{-2}$	-37.92381	8.389470	-4.520407	0.0004*
$ECT_{(-1)}$	**-0.694016**	**0.109559**	**-6.334642**	**0.0000***

Note: * and *** denote statistical significance levels of 1% and 10%, respectively.

As indicated in Table 6, all variables are statistically significant in the long run. In the long run, an increase in the financial development index ($lfin$), which represents financial development, the ratio of bank loans to GDP ($lcre$), and economic growth ($lgdp$) is associated with a decrease in youth unemployment ($lyou$), while an increase in population ($lpop$) is associated with a strong increase in youth unemployment. To be more precise, a 1% increase in the financial development index results in a 1.67% reduction in youth unemployment, a 1% increase in the ratio of bank loans to GDP leads to a 0.08% decline, and a 1% rise in economic growth causes a 0.42% drop. Conversely, a 1% expansion in the population is associated with an increase of 4.84% in youth unemployment.

In the short term, a statistically significant nexus is observed between youth unemployment ($lyou$) and financial development variables ($lfin$ & $lcre$) and population ($lpop$), whereas no statistically significant relationship is evident with economic growth ($lgdp$). Moreover, the $ECT_{(-1)}$ value, which represents the

error correction model coefficient, is also negative, and the p-value is less than 0.05, indicating that it is statistically significant. Accordingly, in the event of a deviation from the established model in the short term, approximately 69% of the deviations are eliminated in the first term and approach long-term equilibrium.

5. CONCLUSIONS and POLICY IMPLICATION

The input of labor is of paramount importance for the production of goods and services, and countries strive to achieve and maintain full employment. The issue of unemployment is a complex phenomenon with economic and social dimensions, and it represents one of the most significant challenges facing the global community. A particularly salient concern is that of youth unemployment, which constitutes a subcategory of the broader phenomenon of unemployment. The effective utilization of the potential of the younger labor force can make a significant contribution to the achievement of economic growth and development goals. It is therefore imperative that countries address the issue of youth unemployment if they are to benefit economically and socially. A number of economic, structural, and political factors may lead to the phenomenon of youth unemployment. The objective of this study is to direct attention to the field of financial development, which has been relatively neglected in the economic literature. In this context, the study aims to examine the role of financial development in reducing youth unemployment in Türkiye.

The model presented in this study is based on the model developed by Raifu et al. (2024). Due to the presence of various data limitations, the sample period has been set at 1988-2021. The stationarity of the data was initially determined through the implementation of unit root tests within the analytical framework. Given the presence of disparate stationarity levels, the ARDL model was deemed the optimal choice. Once the ARDL model had been established, the Bound test and a range of diagnostic tests were applied. The results of these tests indicated the presence of a long-run relationship and demonstrated the suitability of the diagnostic tests for the model. With regard to the long-run coefficients, it is evident that an increase in the financial development index ($lfin$) and the ratio of bank loans to GDP ($lcre$), which are employed to represent financial development, is associated with a reduction in youth unemployment ($lyou$). The analysis revealed that the financial development index exerts a more pronounced effect. This result is consistent with those reported by Raifu et al. (2024) and Emekaraonye et al. (2023). Moreover, the results indicate that an increase in GDP per capita ($lgdp$) has a negative effect on youth unemployment, while an increase in population ($lpop$) has a significant positive impact on reducing youth unemployment. In accordance with the error correction model, which elucidates short-run effects, approximately 69% of deviations from the model in the short run are rectified in the initial period and converge towards long-run equilibrium.

It is imperative that Türkiye develop a novel employment strategy to effectively address the issue of youth unemployment. It is the responsibility of the state to identify unemployed youth and address their labor market issues. The creation of new employment areas, the guarantee of equal opportunities, and the implementation of lifelong education are of paramount importance. It is not sufficient for policies to merely expand the scope of employment; they must also enhance the working conditions of those who are already employed. Furthermore, the provision of financial development enables young people to readily obtain the requisite financial resources for their own businesses, and it facilitates their transition to employment by creating new job opportunities. Consequently, it is imperative that both the government and the private sector augment their policies and practices to ensure financial development and financial depth.

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