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Research Article / *Araştırma Makalesi*

THE RELATIONSHIP BETWEEN COMMERCIAL CREDIT AND EMPLOYMENT: AN APPLICATION ON TÜRKİYE WITH CAUSALITY ANALYSIS

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ABSTRACT

Banking sector credits have an important role in the functioning of the monetary transmission mechanism. Policies implemented to determine the money supply affect the credit channel and the real economy through monetary transmission. The sound functioning of the credit channel is closely related to the stable management and the level of development of the financial system. In this study, the relationship between commercial loans provided by the Turkish banking sector and employment is analyzed. The study utilizes monthly unemployment rates and commercial loans provided by the Turkish banking sector for the period 2015:M01-2023:M3. The stationarity levels of the variables are investigated with Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests. Granger Causality test and Toda Yamamoto method are used to determine whether there is causality between the variables and if there is a causality relationship, its direction. According to the results of causality analysis, it is concluded that there is no causality relationship between employment data and Turkish banking sector commercial loans.

Keywords: *Turkish Banking Sector, Commercial Credit, Unemployment, Employment, Toda Yamamoto.*

JEL Classification: *E24, G21, C50*

TİCARİ KREDİ İLE İSTİHDAM ARASINDAKİ İLİŞKİ: NEDENSELLİK ANALİZİ İLE TÜRKİYE ÜZERİNE BİR UYGULAMA

ÖZET

Bankacılık sektörü kredileri, parasal aktarım mekanizmasının işleyişinde önemli bir yere sahiptir. Para arzının belirlenmesine ilişkin uygulanan politikalar, parasal aktarım yoluyla kredi kanalını ve reel ekonomiyi etkiler. Kredi kanalının sağlıklı biçimde çalışması, finansal sistemin istikrarlı yönetimi ve gelişmişlik düzeyi ile yakından ilişkilidir. Bu çalışmada, Türk bankacılık sektörünün sağlamış olduğu ticari krediler ile istihdam arasındaki ilişki incelenmiştir. Çalışma da 2015:M01-2023:M3 dönemleri arasında Türk bankacılık sektöründe kullandırılan ticari krediler ile aylık işsizlik oranları verileri kullanılmıştır. Değişkenlerin durağanlık seviyeleri Augmented Dickey-Fuller (ADF) ve Phillips-Perron (PP) birim kök testleri ile araştırılmıştır. Değişkenler arasında nedenselliğin olup olmadığı, nedensellik ilişkisi varsa yönlerinin tespiti için Granger Nedensellik testi ve Toda Yamamoto yöntemi kullanılarak analiz edilmiştir. Nedensellik analizi sonuçlarına göre istihdam verileri ile Türk bankacılık sektörü ticari kredileri arasında nedensellik ilişkisinin olmadığı sonucuna varılmıştır.

Anahtar Kelimeler: *Türk Bankacılık Sektörü, Ticari Kredi, İşsizlik, İstihdam, Toda Yamamoto.*

JEL Sınıflandırması: *E24, G21, C50*

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1. Introduction

When economic systems are analyzed, it is observed that the system consists of two main segments. These are called the financial sector and the real sector. The real sector is the part where activities such as investment and production are carried out. The financial sector performs the task of financing the investment and production activities in the real sector (Karahan et al., 2018: 26). It is observed that banks undertake this task to a large extent in financial markets at the point of providing financing. Especially in developing countries, it is known that the liquidity needs of large enterprises, small enterprises and even public institutions, which want to invest but cannot find the necessary financial support, are largely met by banks. Banks realize this process through monetary transmission mechanisms (Yetiz & Ünal, 2021: 20).

A review of the literature reveals that the share of credit markets and especially banks in the studies on the fund transmission mechanism in financial markets has been increasing day by day, especially in recent years. After the importance of banks in the markets and the economy attracted attention, the importance of bank loans as a transmission variable in the monetary transmission mechanism has continued to increase, attract attention and develop. It is also known that banks mediate the safe transfer of funds and contribute to the conversion of savings into investment through various financial instruments. However, within these functions, banks provide different and more effective financial instruments to the real sector with the credit facilities provided by banks. It is also observed that the loans provided by banks facilitate the provision of funds and thus contribute to the expansion of the volume of the general economy.

When banking functions are taken into account, it is seen that the most important function is to channel the funds drawn into the financial system to the areas and sectors that will provide the highest contribution to economic development. With the functioning of this function, financial efficiency is also realized (McCaig, 2005: 111). Banking functions offered in this way meet the fund supply needed by the real sector and can provide solutions to problems such as underinvestment due to insufficient savings. Well-functioning financial markets in the economy enable capital accumulation and help small funds to be directed towards large investments (Aslan & Küçükaksoy, 2006: 28). When the amount of credit extended by banks increases, the supply and demand for lendable funds in the economy increases, the volume of financial markets expands, and national income and employment in countries increase. Thus, it is known to contribute to the growth of the economy, indirectly to the creation of new job opportunities and employment (Thesmar & Thoenig, 2004: 15).

When the studies examining the relationship between credit volume and employment are examined in general, it is concluded that the credit facilities provided to the private sector create new employment areas in the country, increase job opportunities and the employment rate (Göçer et al., 2015: 67). In this study, it has been tried to determine whether commercial loans have any effect on employment with their transformation into investments, that is, whether they act together. As a result of the literature review, it is thought that this study will contribute to the literature as there is a limited number of studies examining the relationship between commercial credit and employment. In this context, firstly, a review of the previous domestic and foreign literature on the subject is conducted. Then, after providing information about the data set and methodology used in the study, the findings of the study are presented and the study is concluded.

2. Literature Review

In the literature, the relationship between commercial loans and employment has been addressed in different types by researchers. When the studies on the subject are analyzed, it is observed that the studies on the relationship between commercial loans and employment are mostly focused on credits and economic growth. In this respect, some of the studies investigating the relationship between trade credits and macroeconomic factors are summarized in Table 1.

Table 1: Literature Review

Authors	Country	Method	Findings
Bernanke & Blinder (1992)	ABD	VAR Model	The analysis reveals that the movements in bank loans and real activity are parallel and that the credit channel works.
Levine & Zervos (1998)	47 Selected Countries	Horizontal Cross Section Analysis	There is a positive and strong relationship between banking sector development and economic growth.
Beck et al. (1999)	63 countries	Horizontal Cross Section and Dynamic Panel Method	As a result of the study, a long-run relationship was found between loans to the private sector and economic growth.
Nilsen (2002)	Chile	VAR Model	The study finds that the credit channel is effectively the main source of macroeconomic activity.
Çiçek (2005)	Türkiye	VAR Model	The study finds that the bank credit channel is not effective in the financing of the real sector.
Öztürkler & Çermikli (2007)	Türkiye	VAR Model and Grander Causality Analysis	As a result of the analysis, it is concluded that there is a one-way relationship between real loans extended by banks and a two-way relationship between loans and industrial production.
Ceylan &Durkaya (2010)	Türkiye	Granger Causality Test and Error Correction Model	It is concluded that the domestic credit volume ratio and economic growth accelerate financial development in Turkey.
Bofondi &Ropele (2011)	Italy	Regression Analysis	As a result of the study, it is found that there is a positive relationship between loan rates calculated for loans to companies, unemployment rate and net interest rates.
Muratoğlu (2011)	Türkiye	Granger Causality Analysis and VAR Model	As a result of the study, despite the high growth rates observed in Turkiye, employment has not increased and even unemployment has increased in response to growth.
Özcan & Arı (2011)	Türkiye	VAR Model	In the study, they found the existence of unidirectional causality from short-run economic growth to financial development.

Table 1 continue

Shabbir (2012)	Pakistan	Border Test Approach	Financial development has a positive effect on employment in the long run, It was stated that the credit facility provided to the private sector increased job opportunities in the country and raised the employment rate.
Tuğcu & Aslan (2012)	Türkiye	VAR Model	It is stated that financial development has a positive effect on employment, and that increasing the level of financial development increases the level of employment.
Açıkgöz (2012)	Türkiye	Border Test Approach	The analysis reveals that this hypothesis is valid in Turkey and that trade and financial openness contribute to financial development.
Pagona & Pica (2012)	63 selected countries	Panel Data Analysis	It is determined that the improvement in credit volume has a positive impact on the level of employment and thus on economic activity.
Ulusoy & Akarsu (2012)	Türkiye	Non-empirical Simple Data Analysis	The study concluded that there is a positive relationship between employment and SME loans.
Feldman (2013)	78 selected countries	Panel Data Analysis	The study shows that a high level of financial system coverage has a mitigating effect on unemployment.
Meçik &Avşar (2014)	OECD Countries	Dynamic Panel Data Analysis	For 22 OECD countries, it reveals that financialization increases employment.
Jenkins & Hussain (2014)	Türkiye	Multiple Regression Model	They found a positive relationship between SME loans and economic growth.
Göçer (2015)	Türkiye	Maki Multiple Structural Break Cointegration Test Dynamic EKK Method	The findings suggest that increasing credit volume has a positive impact on economic growth and employment.
Turgut & Ertay (2016)	Türkiye	Granger Causality Test	A unidirectional causality relationship is found between bank loans and economic growth.
Karaçayır (2016)	Türkiye	Johansen Cointegration Test	In the long run, a bidirectional causality relationship was found between total loan volume of deposit banks and economic growth.
Kandemir, et al. (2018)	Türkiye	Toda Yamamoto and Granger Causality Analysis	Sectoral loans are found to be associated with economic growth.
Baş & Kara (2018)	Türkiye	ARDL Model	Both long-run and short-run findings suggest that banking sector credit growth has an impact on economic growth in Turkey and that credit growth supports economic growth.

Table 1 continue

Üzer (2019)	9 OECD countries	Homogeneity and Cross-Section Cointegration Dumitrescu and Hurlin Causality	The findings indicate that there is a long-run cointegration relationship between financialization and unemployment rate. On the other hand, there is a mutual causality relationship between these variables.
Hatipoğlu (2019)	D8 Countries	Quantile Regression Method	It is concluded that employment is negatively affected as D8 economies become more financialised.
Çıplak & Kılıç (2021)	Türkiye	Granger Causality Test	In the study, employment developments are analyzed both in the short-medium also have an impact on retail loan NPL developments in the long run.
Gür (2023)	Türkiye	Bayer-Hanck Cointegration Analysis	As a result of the study, it is determined that increases in credit volume have a decreasing effect on the unemployment rate in Turkiye.

As a result of the literature review, it is observed that the studies are on employment and economic growth on the basis of credit types. Domestic and foreign studies have generally revealed that loans provided by the financial system and banks and the expansion in the volume of loans have unidirectional and bidirectional effects on economic growth and employment. In the analyzed studies, it has been observed that loans are analyzed in the form of total loans or as retail and SME loans on the basis of studies that examine the relationship between economic growth and employment. Our study differs from the literature in that it examines the relationship between total commercial loan volume of the banking sector and employment.

3. Method and Data Set

In this section of the study, the analyses applied to determine the relationship between the volume of commercial loans and employment in the Turkish banking sector are explained.

3.1. Method and Purpose of the Study

This study analyzes the relationship between trade credit volume and employment in the Turkish banking sector. In the study, time series analysis is used to examine the relationship between commercial loans provided by the banking sector and unemployment rates. "Augmented Dickey-Fuller (ADF) and Phillips Perron (PP) unit root tests are used to determine the stationarity levels of the variables." To determine whether there is causality between the variables and if there is a causality relationship, it is tested with Toda Yamamoto analysis in the form of reciprocal analysis.

3.2. Data Set

The study covers monthly data between 2015:M01-2023:M3. In determining the date range, since the earliest available date for commercial loan volume data is 2015:M01, the data set range is formed in this way. The commercial loan variable is constructed by dividing the

commercial loan volume of the banking sector by the total banking sector loan volume. Unemployment rates are used as employment data. The number of unemployed in an economy is the number of adults in that economy who do not have a job and cannot find a job even though they want to work at the current wage level. The unemployment rate in an economy is the share of the unemployed in the total labor force (employed + unemployed). The data set for the variables in the study was obtained from the websites of the Turkish Statistical Institute (TURKSTAT) and the Banking Regulation and Supervision Agency (BDDK). EViews10 program was used in the study. Explanations, abbreviations and information on the variables used in the study are summarized in Table 2.

Table 2: Descriptions of the Data Set

Variables	Name of Variables	Time Interval	Data Period	Source
UR	Unemployment Rate	2015:M01-2023:M3	Monthly	TUIK, BDDK
CL	Commercial Loan			

Figure 1: Time Series Graphs of Variables

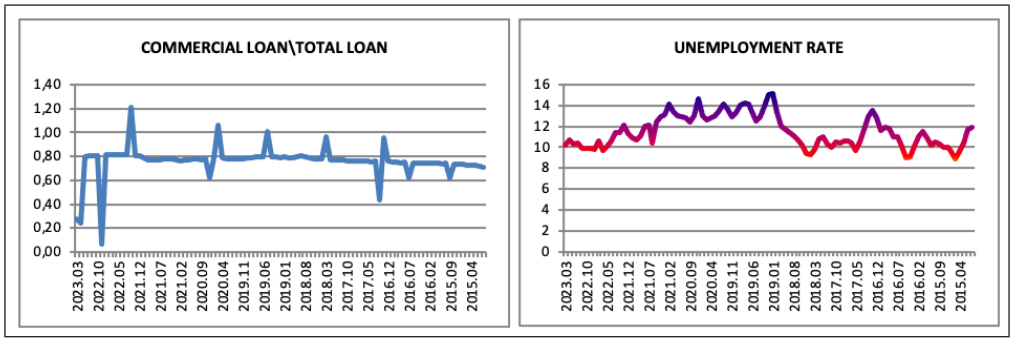

Figure 1 shows the time series graph of the variables related to the dataset used in the study. It is observed that commercial loans decreased during the crisis periods (2018 currency attack crisis, 2016 coup attempt, 2020 pandemic period). There is also a decline in 2022 due to regulatory changes and the rise in interest rates. Similar to commercial loans, unemployment rates also increased during the crisis and pandemic periods.

3.3. Hypotheses of the Study

In the research, the hypotheses to be tested regarding whether there is a relationship between the variables and whether the data sets contain trends are determined as follows:

H_0: There is no causality relationship between trade credits and employment.

H_1: There is a causal relationship between trade credits and employment.

3.4. Augmented Dickey-Fuller (ADF) Unit Root Test

The Extended Dickey-Fuller unit root test is frequently used by researchers to determine whether the series used in the analysis contain unit roots. This unit root test can be characterized as a different version of the Dickey-Fuller (DF) unit root test based on the AR(1) process. However, in time series, εt (error/residual terms) loses its clean series property if there is a higher order correlation in the series. To solve this problem, the ADF test utilizes the AR(p) process rather than the AR(1) process and includes "p" lagged difference terms in the equation (Dickey & Fuller, 1979). Thus, ADF equations without constant term and trend (none), with constant term (intercept) and with constant term and trend (intercept&trend) respectively:

$$\Delta y_t = \delta y_{t-1} + \sum_{i-1}^{p} \beta_i \, \Delta y_{t-i} + \varepsilon_i \quad (1)$$

$$\Delta y_t = \mu + \delta y_{t-1} + \sum_{i-1}^{p} \beta_i \, \Delta y_{t-i} + \varepsilon_i \quad (2)$$

$$\Delta y_t = \mu + \beta t + \delta y_{t-1} + \sum_{i-1}^{p} \beta_i \, \Delta y_{t-i} + \varepsilon_i \quad (3)$$

is in the form. In equations 1, 2 and 3, μ corresponds to the constant term, t to the trend, p to the number of lags and εt to the error term series. For all three ADF equations, the null hypothesis is formulated in the same way and states that the series contains a unit root. Therefore, the null hypothesis states the existence of a non-stationary series (Gujarati, 2015: 328).

3.5. Phillips-Perron (PP) Unit Root Test

The Dickey-Fuller test is based on the basic assumptions that error terms are independent and constant variance. Moreover, the DF test does not yield adequate results in series with structural breaks. Phillips- Perron tried to generalize the DF test by smoothing its assumptions about error terms (Demirel, 2015: 28). In this transformation, the nonparametric method was utilized (İnce, 2015: 30).

As in the ADF test, the PP test is also applied in three different ways: without constant, with constant, and with constant and trend (Samut, 2016: 40).

$$\Delta y_t = a y_{t-1} + x_t^{l} \delta + \varepsilon_t \quad (4)$$

is of the form. In equation 4, a= ϱ -1, "xt " is the set of deterministic components (constant term or constant term and trend) and "εt " is the set of error (residual) terms. In the PP test, the main and alternative hypotheses are formulated as "H_0: α = 0 and H_1: α < 0" and the main hypothesis states that the series contains a unit root (Çağlayan & Saçalı, 2006).

3.6. Causality Tests

3.7. Granger Causality Analysis

The Granger causality relationship means that the independent variable X in the regression has a causal relationship with the dependent variable Y. For this to be the case, two basic conditions must be met. The first one is that the dependent variable X mediates the prediction of the independent variable Y. The second assumption is that Y will not be effective in predicting X. This is called unidirectional causality. In causality tests, the direction of the tests is important, that is, it is very important in determining whether the variables are dependent or independent. The direction of causality is very important in understanding whether the relationships between two or more variables are unidirectional, bidirectional or no relationship at all (Granger, 1969: 424-438; Kennedy, 2006: 81-82; Gujarati, 2006: 620-623). Granger causality test allows the causality analysis between dependent and independent variables in the "short run" period.

$$y_t = a_1 + \sum_{i-1}^{n} \beta_i x_{t-i} + \sum_{j=1}^{m} Y_j\, y_{t-j} + e_{1t} \quad (5)$$

$$x_t = a_2 + \sum_{i-1}^{n} \Theta_i x_{t-i} + \sum_{j=1}^{m} \delta_j\, y_{t-j} + e_{2t} \quad (6)$$

If H_o hypothesis is rejected, it means that X has a Granger causality relationship with Y. In the Granger causality test, there can be both a direction from X to Y and a direction from Y to X. This is called bidirectional causality. It is denoted as X↔Y. If both H_0 hypotheses are rejected, it is possible to say that there is a bidirectional causality between X and Y variables. In order to conduct Granger causality test between X and Y series, the covariance of both variables should be stationary and stochastic.

3.8. Toda-Yamamoto Causality Analysis

The Toda Yamamoto causality test is based on the VAR (VectorAutoregressive) model. In the analysis, after determining the appropriate lag length of the VAR model (m) and the maximum degree of stationarity of the series used (d_{max}), a VAR model of size ($m+d_{max}$) is estimated. The VAR (m+dmax) model estimated in the Toda Yamamoto causality approach consists of the following equations (Toda & Yamamoto, 1995).

$$Y_t = \omega + \sum_{t-1}^{m} a_{1i}\, x_{t-i} + \sum_{i=1}^{m} \beta_{1i} Y_{t-i} + \sum_{j=m+1}^{dmax} \delta_{1i} X_{t-i} + \sum_{j=m+1}^{dmax} \theta_{1i} Y_{t-i} + \varepsilon_{1t} \quad (7)$$

$$X_t = \varphi + \sum_{i=1}^{m} a_{2i}\, X_{t-i} + \sum_{i=1}^{m} \beta_{2i} Y_{t-i} + \sum_{j=m+1}^{dmax} \delta_{2i} X_{t-i} + \sum_{j=m+1}^{dmax} \theta_{2i} Y_{t-i} + \varepsilon_{2t} \quad (8)$$

The appropriate lag length (m) can be determined with the help of information criteria and the maximum degree of integration (d_{max}) can be determined by unit root tests (Toda &Yamamoto, 1995).

4. Findings

Summary statistical information on the variables analyzed within the scope of the research is presented in Table 3:

Table 3: Summary Statistical Information

	CL	UR
Mean	0.760378	1.150.306
Median	0.774299	1.110.000
Maximum	1.211.295	1.510.000
Minimum	0.064699	8.900.000
Std. Dev.	0.130402	1.515.994
Skewness	-2.250.774	0.432423
Kurtosis	1.550.102	2.200.785
Jarque-Bera	7.208.696	5.662.365
Probability	0.000000	0.058943
Sum	7.451.702	1.127.300
Sum Sq. Dev.	1.649.465	2.229.291
Observations	98	98

The correlation values between the variables used in the study are presented in Table 4 according to the method examined.

Table 4: Correlation Matrix Between Variables

	CL	UR
CL	1	
UR	0.158284096	1

According to Table 4, when the correlations between the variables are analyzed There is no coefficient greater than the critical value of 0.80 suggested by Gujarati & Porter (2009). Therefore, it is seen that there is no multicollinearity problem between the variables.

Before proceeding to the causality analysis, it is necessary to check whether the series contain unit roots, that is, whether they are stationary. For this purpose, ADF (Augmented-Dickey-Fuller) and PP (Phillips-Perron) tests were conducted. The purpose of these tests is to prevent spurious regression. "The results of ADF and PP unit root tests are presented in Table 5 below."

Table 5: ADF and PP Unit Root Test Results

		ADF Test Statistic		Phillips-Perron Test Statistic	
Variables	**Level**		**First Difference (Δ)**	**Level**	**First Difference (Δ)**
UR	-3.1347**		-	-2.7068	-7.963*
CL	-7.6095**		-	-7.6095*	-
Significance Level	1%	-3.5014	-4.0486	-3.4999	-3.5014
	5%	-2.8925	-3.4536	-2.8918	-2.8925
	10%	-2.5813	-3.1524	-2.583	-2.5833

Note: * is significant at 1%, ** is significant at 5% significance level.

According to the test results applied to check the stationarity of the series used in the research, according to the ADF test statistics, UR and CL variables are stationary, while according to the PP test statistics the IO variable is stationary after taking the first difference.

4.1. Causality Analysis Results

According to Table 4, for the application of the Granger causality test; VAR analysis was performed. The optimal lags of the variables were determined. Considering the trade credit and employment data, lag 1 was found to be the most appropriate lag according to the Akaike information criterion.

Table 6: Granger Causality Test Results

Independent Variable	Dependent Variable	K	Chi-Square Test Statistic	Chi-Square P-value	Relationship and Direction
UR	CL	1	0.7904	0.0919	None
CL	UR	1	2.9004	0.1710	None

Table 6 presents the Granger Causality Relationship. When trade credit and employment are analyzed, the probability value is greater than 0.05, indicating that there is no mutual causality relationship. In this case, it is seen that the H_0 hypothesis is accepted and the H_1 hypothesis is rejected in the hypotheses established towards the UR independent variables in the CL dependent variable. Likewise, it is seen that H_0 hypothesis is accepted and H_1 hypothesis is rejected in the hypotheses established in the UR dependent variable towards the CL independent variables.

The Toda-Yamamoto Model is used to examine whether there is causality between the series. The variables were tested mutually. While determining the causality between the series, the lag length (k) of the series was found according to the "Akaike Information Criterion". Then, the "Wald Statistic" was applied to the (k) lagged values of this model and it was determined whether there was a causality relationship between the variables. Toda-Yamamoto Causality test results are presented in Table 7 and Table 8.

Table 7: Wald Test Results (Independent Variable UR)

Independent Variable	Dependent Variable	D_{max}	K	Chi-Square Test Statistic	Chi-Square P-value	Relationship and Direction
UR	CL	1	1	0.7904	0.3740	None

According to the results of the Wald test in Table 7, at the 5% significance level, the H_0 hypothesis is accepted and the H_1 hypothesis is rejected in the hypotheses established from the CL dependent variable to the UR independent variables." In other words, it is concluded that there is no causality relationship between the Turkish banking sector's commercial loan volume and employment data as of the analyzed periods.

Table 8: Wald Test Results (Independent Variable CL)

Independent Variable	Dependent Variable	D_{max}	K	Chi-Square Test Statistic	Chi-Square P-value	Relationship and Direction
CL	UR	1	1	3.1114	0.0776	None

According to the results of the Wald test in Table 8, again at the 5% significance level, it is seen that the H_0 hypothesis is accepted and the H_1 hypothesis is rejected in the hypotheses established towards the CL independent variables in the UR dependent variable. In other words, "it is concluded that there is no causality relationship between employment data and commercial loan volume data of the Turkish banking sector as of the analyzed periods."

5. Conclusion

Banks have many functions such as financial intermediation, evaluation and monitoring of credit demanders, providing and monitoring liquidity, influencing the distribution of income and wealth, increasing the effectiveness of monetary policies, and developing national and international trade. Among the most important of these functions is the function of meeting the supply of funds. Whether it is individual or commercial sector, the need for funds may arise at any time and this is where banks come into play.

As banks fulfill their function of meeting the supply of funds in the economy, their share in the financial system increases and brings about the expansion of their share in the economic system. In this context, commercial credits provided by banks enable savings to be transformed into real investments by those demanding funds. Savings that are transformed into real investments pave the way for the growth in the volume of markets and the creation of new employment opportunities. At this point, it is observed that the loans provided by banks are the main drivers of economic growth.

In this study, the relationship between commercial loans extended by the banking sector in Turkiye and the unemployment rate is analyzed using ADF (AugmentedDickey-Fuller) and PP (Phillips-Perron) unit root tests. The tests applied to reveal the relationship between commercial loans and employment cover the period 2015:M01-2023:M3 and consist of monthly data. As a result of the unit root test, ADF (AugmentedDickey-Fuller), UR (Dependent Variable) and CL (Independent Variable) variables are stationary at level, while PP (Phillips-Perron Test Statistic) test shows that UR variable becomes stationary after taking the first difference.

As a result of the analysis, it is seen that H_0 hypothesis is accepted and H_1 hypothesis is rejected in the hypotheses established from the UR dependent variable to the CL independent variables at 5% significance level. These results statistically indicate that there is no causality relationship from trade credits to employment. Therefore, there is no causality relationship from commercial loans to employment figures in the Turkish banking system. Thus, it is concluded that increases or decreases in commercial loan items do not affect employment figures in the Turkish banking system within the analyzed time interval. In this study, it is thought that the fact that a causality relationship between trade credit and employment at 5% significance level was not found contrary to expectations may be due to the time interval used in the data and the fact that only the trade credit variable rather than the total loan volume of the banking sector was evaluated in the study. It is also possible to mention a relationship at 10% significance level. When "the results of the study are compared with the literature," they are similar to the results of Muratoğlu (2011) and Karaçayır (2016), while they differ from the results of Bofondi & Ropele (2011), Shabbir (2012), Pagona & Pica (2012), Ulusoy & Akarsu (2012) and Göçer (2015). The reason for the difference is thought to be due to the date range, variables and analysis methods used.

When the Turkish economy is analysed in general, the largely successful implementation of the Transition to a Strong Economy Programme announced in April 2001, the stability in the country after the 2002 elections and the expansion of the financial sector thanks to the abundance of financing experienced worldwide in the post-2004 period have made it possible to meet the credit demands of the domestic market easily, the increased credits have increased consumption and investment expenditures and have been effective in significantly reducing the unemployment rate. In 2008, when unemployment rates rose above 10 per cent in the US and above 25 per cent in Spain and Greece due to the global financial crisis, the Turkish economy provided significant employment and managed to reduce the unemployment rate, which had risen above 14 per cent in 2009, to 8.5 per cent in 2023.

A general review of the literature reveals that credit expansion is directly related to inflation and the current account deficit as well as employment and economic growth. In this case, prioritizing investment and export-oriented credits through selective credit practices may be an appropriate policy instrument to ensure employment and economic growth without increasing inflation and the current account deficit. A quick and effective way to prevent employment and income losses by keeping domestic demand and investments alive, especially in times of economic crisis, is to contribute to the development of the financial sector and encourage it to extend more credit. However, excessive risk-taking by banks in order to extend more credit may lead to a repeat of the problems experienced in the US housing loans in 2008. In this context, supervisory and regulatory institutions such as the Banking Supervision and Regulation Agency and the Central Bank have important roles to play.

In future studies, the scope of the research could be narrowed regionally or sectorally to make the results of this study more meaningful. Or an examination of many countries It is thought that a new study covering the scope of this study will make an important contribution to the literature.

Contribution Statement of Researchers

The contribution to the study belongs to author only.

Conflict of Interest Statement

There are no conflicts of interest with any institution or individual within the scope of this study.

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