“The impact of economic growth, inflation, and exports on domestic credit to the private sector in Turkey”

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ARTICLE INFO	Zeynab Giyasova, Rashad Salahov, Aynur Jabbarova, Mustafa Kemal Oktem and Fidan Safarova (2026). The impact of economic growth, inflation, and exports on domestic credit to the private sector in Turkey. *Investment Management and Financial Innovations*, *23*(1), 253–263. doi: 10.21511/imfi.23(1).2026.19
DOI	http://dx.doi.org/10.21511/imfi.23(1).2026.19
RELEASED ON	Tuesday, 17 February 2026
RECEIVED ON	Saturday, 29 November 2025
ACCEPTED ON	Friday, 06 February 2026

JOURNAL	"Investment Management and Financial Innovations"
ISSN PRINT	1810-4967
ISSN ONLINE	1812-9358
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
34	2	8

BUSINESS PERSPECTIVES

LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine

www.businessperspectives.org

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THE IMPACT OF ECONOMIC GROWTH, INFLATION, AND EXPORTS ON DOMESTIC CREDIT TO THE PRIVATE SECTOR IN TURKEY

Abstract

This study analyzes the causal relationships between economic growth, inflation, exports, and domestic credit to the private sector in Turkey using annual data covering the period from 1990 to 2024, obtained from the World Bank and the Turkish Statistical Institute. The empirical strategy is based on a Vector Autoregressive (VAR) modeling framework combined with the Toda–Yamamoto Granger causality approach, with the long-run interactions among the variables further examined through Johansen cointegration analysis. This integrated methodology allows for a comprehensive assessment of both short-run dynamics and long-term equilibrium relationships in the Turkish macro-financial system. The empirical findings from the Toda–Yamamoto causality tests reveal statistically significant causal effects running from exports of goods and services, economic growth, and inflation to domestic credit to the private sector. Specifically, exports (EXGS), GDP growth (GDPG), and inflation (INF) each exert a meaningful influence on domestic private sector credit (DOCR), indicating that historical movements in these macroeconomic variables possess substantial explanatory and predictive power for credit dynamics. These results underscore the importance of real economic activity, external trade performance, and price stability in shaping the evolution of financial intermediation in Turkey. From a policy perspective, the results imply that maintaining export competitiveness, promoting stable and inclusive economic growth, and ensuring low and predictable inflation are essential for improving private sector credit access, reinforcing financial sector performance, and fostering sustainable economic development and macroeconomic stability in Turkey.

Keywords domestic credit, finance, bank, private sector finance, economic growth, inflation, exports, Turkey

JEL Classification E51, E44, F43, C32

Type of the article: Research Article

Received on: 29th of November, 2025
Accepted on: 6th of February, 2026
Published on: 17th of February, 2026

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Conflict of interest statement:
Author(s) reported no conflict of interest

INTRODUCTION

Domestic credit to the private sector reflects the financial resources provided to private entities, including loans, purchases of non-equity securities, trade credits, and other receivables that generate repayment obligations. In some countries, this measure may also encompass credit extended to public enterprises (TE, 2025). In Turkey, the share of monetary sector credit to the private sector in GDP was 43.337% in 2023, down from 48.351% in 2022 (CEIC, 2025). The financial system plays a critical role in mobilizing and channeling resources toward the real sector, thereby enhancing the efficiency of capital allocation and supporting productive economic activity (Kurt, 2025; Yiğitbaş, 2015). Empirical evidence from Turkey indicates a predominantly unidirectional causal relationship between various forms of bank lending, such as commercial loans, consumer loans, and credit card usage, and economic growth, with commercial loans exerting a particularly significant effect on GDP (Altun & Yağcılar, 2023).

GDP per capita, calculated as total GDP divided by midyear population, serves as a key measure of economic well-being. In Turkey, GDP, representing the gross value added by all resident producers adjusted for product taxes and subsidies but excluding depreciation and natural resource depletion, is estimated at 15,473 US dollars in 2024 (FRED, 2025). Despite the steady pace of economic expansion, the country continues to experience persistently high inflation, which reached an average of 58.51% in 2024, posing a major macroeconomic challenge (O'Neill, 2025). Exports also constitute a central component of Turkey's economic activity, amounting to 356.90 billion US dollars in 2023, a 1.97% increase from 2022, with key export products including cars, gold, refined petroleum, motor vehicle parts, and jewellery (Macrotrends, 2024; OEC, 2024).

In this context, domestic credit to the private sector can be conceptualized as bank-based lending, representing the financial resources that commercial and deposit money banks allocate to private enterprises and households. This places the analysis within the framework of financial intermediation, emphasizing the banking sector's role in mobilizing savings and distributing capital toward productive economic activities. Although the importance of domestic credit, GDP growth, inflation, and exports in Turkey's financial and economic landscape is widely recognized, there remains a lack of comprehensive empirical analyses that examine the simultaneous interactions among these variables. Understanding these dynamic relationships is crucial for clarifying how macroeconomic factors influence private sector credit and, by extension, overall economic development in Turkey. Against this background, it is essential to demonstrate the relevance of the research and the scientific problems it addresses, particularly in an economy where financial deepening, price stability, and external sector performance evolve simultaneously. The central scientific problem lies in identifying how economic growth, inflation, and exports interact to influence domestic credit to the private sector, which remains a key transmission channel for sustainable economic development in Turkey.

1. LITERATURE REVIEW AND HYPOTHESES

The body of research examining the nexus between financial development, domestic credit, and macroeconomic performance is extensive and continues to expand as empirical evidence accumulates across various economies. On a global scale, numerous studies have investigated the roles of financial intermediation, trade dynamics, and macroeconomic stability in fostering economic growth and development.

Katusiime (2018) reported that private-sector credit growth in Uganda was positively affected by inflation volatility lagged by one period, implying that a credible monetary policy stance had dampened macroeconomic uncertainty and fostered credit expansion. The analysis also indicated that past credit growth, the nominal exchange rate, and inflation were significant determinants of credit dynamics, while financial innovation, interest rates, and GDP growth exerted no statistically meaningful influence. These results were further supported by comprehensive robustness and sensitivity analyses.

Adam and Alzuman (2024) examined the impact of per capita income, GDP growth, foreign direct investment, sectoral composition, and domestic credit on employment patterns in GCC countries between 2013 and 2023, using both the generalized method of moments (GMM) and ordinary least squares (OLS) approaches. Their analysis revealed that agriculture significantly influenced employment, whereas the services and industrial sectors did not; domestic credit and FDI were also found to be important determinants, while per capita income and GDP growth showed no significant effect, underscoring policy implications for promoting employment through sectoral development.

Mbate (2014) examined the effects of domestic debt on economic growth and private sector credit in 21 sub-Saharan African economies over the period 1985–2010 using a dynamic panel framework. The findings revealed a non-linear relationship between domestic debt and economic growth, with a threshold level estimated at 11.4% of GDP. Additionally, the study showed that domestic debt exerted a crowding-out effect on private sector

http://dx.doi.org/10.21511/imfi.23(1).2026.19

credit, reducing it by approximately 0.3% of GDP, thereby underscoring the need for sound debt management and financial policies that support credit expansion and fiscal sustainability.

Korkmaz (2015) analyzed the impact of domestic credit on macroeconomic variables, specifically inflation and economic growth, across ten European countries using panel data from 2006 to 2012. The study revealed that banking sector credit did not significantly affect inflation but positively influenced economic growth, underscoring the role of financial deepening in supporting real sector development.

Raghutla (2020) analyzed the impact of trade openness on economic growth in five emerging market economies over the period 1993–2016. The study established a long-run equilibrium relationship among trade openness, economic growth, financial development, inflation, labor force participation, and technological progress. The results indicated that trade openness exerted a positive effect on economic growth in the long run, while short-run dynamics revealed bidirectional causality between economic growth and inflation, as well as unidirectional causality running from economic growth to trade openness and financial development. These findings highlighted trade openness as a critical catalyst for economic growth and development in the sampled economies.

Mala et al. (2024) examined the individual and combined effects of inflation, net exports, interest rates, and exchange rates on Indonesia's economic growth between 2015 and 2023, utilizing quarterly secondary data from 2001 to 2023 and analyzing it through Ordinary Least Squares (OLS). The study found that exchange rates, SBI interest rates, inflation, and net exports each had a significant impact on Indonesia's economic growth, both separately and jointly. Relevant scholarly works have investigated various aspects of economic growth, including the influence of human capital across nations, the moderating effect of financial deepening on the relationship between natural resource exports and economic performance in selected countries, and the dynamic interactions among trade openness, inflation, banking sector development, and GDP growth in diverse economic contexts (Bane, 2018; Erdoğan et al., 2020; Hasanov et al., 2025; Phan et al., 2025).

In the Turkish context, Tuna et al. (2022) investigated the relationship between GDP, inflation, and domestic loans to the private sector using annual data from 1972 to 2020. Employing linearity and unit root tests alongside the Kapetanios, Shin, and Snell (KSS) cointegration approach, the study found no long-term cointegrated relationship among the variables, indicating that variations in private sector loans did not significantly influence GDP or inflation. Kıdemli and Yamaçlı (2020) examined the determinants of short- and long-term external debt of the private sector in Turkey using quarterly data from 2000 to 2016, employing the Autoregressive Distributed Lag (ARDL) and Error Correction Model (ECM) approaches. The study found that short-term external debt was positively affected by budget deficits, real exchange rates, and import volumes, with budget deficits exerting the strongest short-term impact, while external interest rates had a weak negative effect. For long-term external debt, foreign interest rates, economic stability, fixed capital expenditure, and export volumes were positively associated, whereas the real exchange rate had a negative effect, with economic stability being the most influential factor. ECM results indicated that short-term imbalances gradually adjusted toward long-term equilibrium. Several significant studies have addressed the topic, particularly focusing on inflation and economic development, which remain enduring challenges in Turkey (Dişbudak, 2010; Akalpler, 2013; Abdullah, 2023).

Overall, the reviewed studies demonstrate that domestic credit, economic growth, inflation, and trade-related variables are closely interconnected, though the direction and magnitude of these relationships vary across countries, time periods, and methodological approaches. Building on these insights, the present research aligns the existing empirical evidence with its objective by focusing on the causal effects of economic growth, inflation, and exports on domestic credit to the private sector in Turkey. These contradictions underscore the need for continued empirical investigation, particularly for emerging economies like Turkey, where inflationary pressures, credit expansion, and growth interdependencies remain central to macroeconomic stability. In accordance with the study's objectives and grounded in relevant theoretical and empirical foundations, the study proposes the following hypotheses:

H_1: *Exports of goods and services (EXGS) exert a statistically significant causal influence on domestic credit to the private sector (DOCR).*

H_2: *GDP growth (GDPG) exerts a statistically significant causal influence on domestic credit to the private sector (DOCR).*

H_3: *Inflation (INF) exerts a statistically significant causal influence on domestic credit to the private sector (DOCR).*

2. DATA AND METHODOLOGY

The study seeks to empirically analyze the causal interactions between selected macroeconomic indicators and domestic credit to the private sector in Turkey using econometric techniques. Its main objective is to test hypotheses regarding the impact of gross domestic product growth, inflation, and exports on private sector credit, thereby providing empirical insights into the mechanisms influencing financial development in the Turkish economy.

The analysis is based on annual time series data spanning the period 1990–2024, obtained from the World Bank (WB, 2025) and the Turkish Statistical Institute (TSI, 2025). The study incorporates four key variables: Domestic Credit to the Private Sector by Banks (% of GDP) (DOCR), Exports of Goods and Services (% of GDP) (EXGS), GDP per Capita Growth (annual %) (GDPG), and Inflation, GDP Deflator (annual %) (INF). Each variable was chosen to reflect essential aspects of Turkey's macroeconomic and financial structure. Specifically, DOCR measures the share of credit extended by deposit money banks to private enterprises and households, expressed as a percentage of GDP. This indicator explicitly captures bank-based lending operations, thereby ensuring that the financial dimension of the study is clearly grounded in banking sector activity. Framing the analysis around this variable allows for a focused assessment of how macroeconomic factors influence bank lending behavior and the efficiency of financial intermediation in the Turkish economy.

The descriptive statistics in Table 1 summarize the empirical characteristics of the time series. Among the variables, INF displays the highest volatility, reflected in its largest standard deviation (35.746), pronounced positive skewness (0.952), and substantial difference between its mean (39.265) and median (23.289). In contrast, EXGS exhibits the lowest volatility, with the smallest standard deviation (5.765) and a relatively small gap between its mean and median, indicating a more stable and symmetric distribution.

Table 1. Descriptive statistics

Statistic	DOCR	EXGS	GDPG	INF
Mean	35.424	23.798	3.426	39.265
Median	28.016	23.370	4.678	23.289
Maximum	70.896	38.584	10.429	143.639
Minimum	14.010	13.365	−6.915	5.446
Std. Dev.	19.670	5.764	4.379	35.745
Skewness	0.475	0.410	−0.923	0.952
Kurtosis	1.657	3.442	3.253	3.231
Sum	1239.873	832.941	119.930	1374.286
Sum Sq. Dev.	13155.54	1129.94	652.025	43444.06
Observations	35	35	35	35

The stacked bar chart in Figure 1 illustrates the temporal trends of four key macroeconomic indicators: Domestic Credit to the Private Sector (% of GDP), Exports of Goods and Services (% of GDP), GDP per Capita Growth (annual %), and Inflation, GDP Deflator (annual %). The visualization indicates that inflation has been the most volatile variable, with pronounced spikes, particularly during the early years of the observed period. In contrast, domestic credit to the private sector exhibits a generally upward trajectory, eventually becoming the largest component in the later years. GDP per capita growth and exports of goods and services demonstrate relative stability, with only moderate fluctuations, and do not attain the extreme levels observed in either credit or inflation.

Following this framework, the research methodology, testable hypotheses, and the underlying conceptual model are clearly outlined to establish the analytical structure of the study. The subsequent Methods section then presents the step-by-step econometric procedure employed, including model specification, lag selection, integration and cointegration testing, and causality analysis. Additionally, the data sources and variable definitions used for empirical calculations are explicitly stated to ensure transparency, replicability, and methodological rigor. To identify the direction and

http://dx.doi.org/10.21511/imfi.23(1).2026.19

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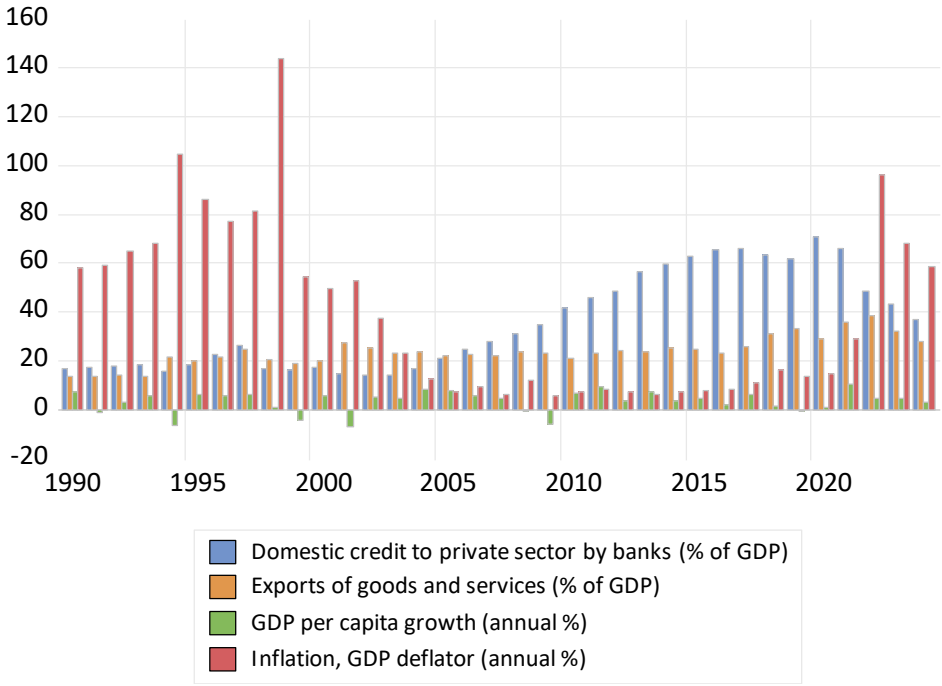

Figure 1. Trends of key macroeconomic indicators (1990-2024)

intensity of causal relationships among these variables, the Vector Autoregressive (VAR) framework was utilized. The Granger (1969) causality test is a well-known method for examining causal relationships; however, the properties of the dataset in this study, namely the mixed integration orders of the variables, make the use of the standard Granger test inappropriate. The Toda and Yamamoto (1995) Granger causality approach was specifically adopted, as it enables causality testing regardless of the integration order of the variables. The general specification of the Toda–Yamamoto model employed in this study can be represented as follows:

$$\begin{aligned} DOCR_t &= \alpha^0 \\ &+ \sum_{i=1}^{k} \begin{pmatrix} \beta_i^1 DOCR_{t-i} + \beta_i^2 EXGS_{t-i} \\ + \beta_i^3 GDPG_{t-i} + \beta_i^4 INF_{t-i} \end{pmatrix} \\ &+ \sum_{j=k+1}^{k+d_{\max}} \begin{pmatrix} \gamma_j^1 DOCR_{t-j} + \gamma_j^2 EXGS_{t-j} \\ + \gamma_j^3 GDPG_{t-j} + \gamma_j^4 INF_{t-j} \end{pmatrix} + \varepsilon_t . \end{aligned} \quad (1)$$

In this framework, the dataset variables are incorporated into the model equation as a vector of endogenous variables. The term α_0 represents the intercept vector, while β_i and γ_j correspond to the matrices of estimated parameters. The vector ε_t captures the white noise error terms.

This method involves estimating an augmented VAR model with ($K + Dmax$) lags, where K refers to the optimal lag length determined through standard information criteria, and $Dmax$ indicates the highest level of integration observed among the variables. Accordingly, the analysis first identified the appropriate lag structure and the maximum order of integration to ensure the reliability of the causality results.

In addition, the Johansen (1988) cointegration test was performed to examine potential long-term equilibrium relationships among the variables, determining whether non-stationary series exhibit a common stochastic trend over time. The robustness and statistical adequacy of the VAR model were further verified through diagnostic tests, including stability checks and assessments for serial correlation, heteroskedasticity, and residual normality, ensuring the consistency and reliability of the empirical findings.

3. RESULTS

Table 2 presents the results of the Augmented Dickey and Fuller (1979) unit root test for the selected variables, with a maximum differencing or-

Table 2. Unit root test outcomes

Variable	ADF Test Result	Order of Integration (I)	Explanation
DOCR	2nd Difference	I(2)	The variable becomes stationary after second differencing; its mean and variance stabilize only after removing two levels of trend
EXGD	1st Difference	I(1)	Stationarity is achieved after first differencing, indicating the series initially has a unit root and a trend
GDPG	Level	I(0)	The series is stationary at level, meaning its statistical properties, such as mean and variance, are constant over time
INF	1st Difference	I(1)	Requires first differencing to achieve stationarity, showing initial non-stationarity with a trend component

Table 3. VAR lag order selection criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	−492.8352	NA	1.40e+08	30.11123	30.29262	30.17226
1	−400.7891	156.1995*	1411648*	25.50237*	26.40935*	25.80754*
2	−385.3953	22.39105	1535313	25.53911	27.17166	26.08841

Note: * Indicates lag order selected by the criterion.

der (Dmax) of 2. The results of the ADF test indicate that GDPG is stationary at level (I(0)), EXGD and INF become stationary after first differencing (I(1)), and DOCR requires second differencing (I(2)) to achieve stationarity. These findings confirm that all series can be appropriately transformed to satisfy the stationarity requirement for further econometric analysis, such as VAR modeling or cointegration tests.

Table 3 presents various criteria used to determine the optimal lag length for the VAR model. All five criteria – LR, FPE, AIC, SC, and HQ – consistently indicate that Lag 1 is optimal, suggesting that a one-period lag sufficiently captures the dynamic interactions among the endogenous variables.

The chart presented in Figure 2 shows the inverse roots of the AR characteristic polynomial, a key diagnostic for evaluating the stability of the estimated VAR model. All inverse roots (represented by blue dots) are located strictly within the unit circle (gray circle), indicating that the VAR model meets the stability condition. This confirms that the model is stationary, and its impulse response functions are valid and interpretable.

The VAR Residual Serial Correlation LM test (Lagrange Multiplier) reported in Table 4 evaluated the null hypothesis of no residual serial correlation up to four lags. For all lag orders considered (1–4), the probability values associated with both the LRE* and Rao F-statistics were greater than

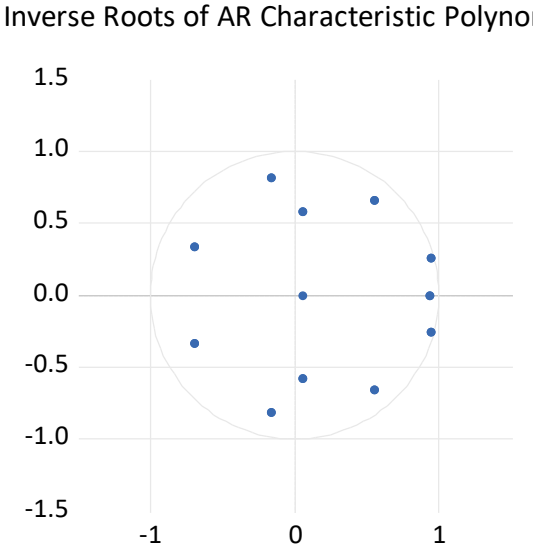

Figure 2. Inverse roots of AR characteristic polynomial

http://dx.doi.org/10.21511/imfi.23(1).2026.19

Table 4. VAR residual serial correlation LM tests

Lag	LRE* Statistic	df	Prob.	Rao F-Statistic	df	Prob.	Inference (at 5% level)
1	15.19363	16	0.5105	0.953780	(16,37.3)	0.5215	Do not reject H_0
2	14.62612	16	0.5522	0.911965	(16,37.3)	0.5627	Do not reject H_0
3	20.53279	16	0.1972	1.374552	(16,37.3)	0.2071	Do not reject H_0
4	13.35028	16	0.6470	0.819892	(16,37.3)	0.6562	Do not reject H_0

0.05, resulting in a failure to reject the null hypothesis. These outcomes indicate that the residuals of the VAR model are free from serial correlation and exhibit white-noise properties, thereby confirming the adequacy of the model specification.

The Jarque-Bera test in Table 5 evaluates the null hypothesis that the residuals of a VAR model follow a multivariate normal distribution. As a joint test, it provides a key diagnostic for the overall model. The test produces a p-value of 0.488, which is well above the conventional 0.05 significance level. Consequently, the null hypothesis is not rejected, indicating that the VAR model residuals are consistent with multivariate normality.

The VAR residual heteroskedasticity test (Table 6) is a joint test designed to examine whether the residual variances in a VAR model remain constant over time, indicating homoskedasticity. The test yields a Chi-square statistic of 239.954 with a corresponding p-value of 0.488, which exceeds the conventional 0.05 significance threshold. Therefore, the null hypothesis of homoskedasticity is not rejected, suggesting that there is no statistically significant evidence of residual heteroskedasticity in the VAR model.

The Johansen cointegration procedure assesses whether non-stationary time series share long-term equilibrium relationships and identifies the number of cointegrating equations (CEs) among them. This method employs two main statistics: the Trace Test and the Maximum Eigenvalue Test, both of which sequentially evaluate the null hypothesis of at most cointegrating vectors against the alternative. By comparing these test statistics to critical values (Table 7), the maximum rank at which the null hypothesis is rejected indicates the number of CEs. Consequently, although the individual series are non-stationary, they exhibit coordinated movement over the long term. Based on the results obtained, a cautious interpretation points to the existence of a single cointegrating equation, implying one stable long-run relationship connecting the variables.

The Toda–Yamamoto Granger causality test results presented in Table 8 show that exports of goods and services (EXGS), GDP growth (GDPG), and inflation (INF) each exert a statistically significant causal effect on domestic credit to the private sector (DOCR), with all p-values below 0.01. This indicates that historical movements in these macroeconomic variables provide meaningful information for predicting changes in domestic credit, underscoring their relevance as determinants. Accordingly, the null hypotheses of no Granger causality are rejected, demonstrating a robust causal influence of these factors on the dynamics of private sector credit.

Table 5. VAR residual normality tests (Jarque-Bera)

Component	Jarque-Bera	Degrees of Freedom (df)	Prob.	Inference (at 5% level)
1	0.145	2	0.929	Do not reject H_0
2	1.589	2	0.451	Do not reject H_0
3	5.155	2	0.075	Do not reject H_0
4	0.558	2	0.756	Do not reject H_0
Joint	7.450	8	0.488	Do not reject H_0

Table 6. VAR residual heteroskedasticity tests

Test	Statistic (χ2)	Degrees of Freedom (df)	Prob. Value	Inference (at 5% significance level)
Joint Test	239.954	240	0.488	Does not reject H_0 (Homoskedasticity)

Table 7. Identifying long-run links with the Johansen cointegration test

Test	Hypothesized No. of CE(s)	Eigenvalue	Statistic	0.05 Critical Value	Prob.	Inference
Trace Test	None	0.671	69.136	47.856	0.000	Reject H_0
	At most 1	0.489	34.597	29.797	0.013	Reject H_0
	At most 2	0.298	13.726	15.494	0.090	Do not reject H_0
	At most 3	0.084	2.745	3.841	0.097	Do not reject H_0
Max-Eigenvalue Test	None	0.671	34.539	27.584	0.005	Reject H_0
	At most 1	0.489	20.870	21.131	0.054	Do not reject H_0
	At most 2	0.298	10.981	14.264	0.155	Do not reject H_0
	At most 3	0.084	2.745	3.841	0.097	Do not reject H_0

Table 8. Toda–Yamamoto Granger causality test results

Null Hypothesis (H_0)	χ^2 Statistic	df	k	p-value	Conclusion
EXGS does not Granger-cause DOCR	15.483	4	1	0.000	Reject H_0
GDPG does not Granger-cause DOCR	10.540	4	1	0.001	Reject H_0
INF does not Granger-cause DOCR	14.211	4	1	0.000	Reject H_0

4. DISCUSSION

These findings underscore the important function of the banking sector as a transmission channel through which macroeconomic conditions, including inflationary trends, economic growth dynamics, and external trade performance, affect the expansion of private sector credit and the stability of the financial system. The Toda–Yamamoto Granger causality analysis provides strong empirical evidence of causal relationships between key macroeconomic variables and domestic credit to the private sector. The statistical significance of exports, GDP growth, and inflation at the 1% level suggests that past movements in these indicators contain meaningful predictive information for private sector credit behavior. In particular, the identified causal link between inflation and domestic credit highlights the significant influence of monetary conditions on credit supply and demand, as inflationary pressures can alter real interest rates and expectations, thereby shaping borrowing and lending decisions.

In comparison, Çetin (2022) analyzed the interplay among foreign debt, GDP, and inflation in Turkey from 1970 to 2020, finding bidirectional causality among these variables. While Çetin focused on external debt dynamics, the current study emphasizes domestic credit as a key internal financial channel through which exports, economic growth, and inflation affect economic activity. Similarly, Sezal and Şerbetçi (2023) observed a unidirectional causal effect from inflation to housing and vehicle loans, with no reciprocal impact from consumer lending on inflation, indicating that specific credit segments are particularly sensitive to price-level fluctuations. Collectively, these studies demonstrate that both external and domestic financial channels play a significant role in shaping Turkey's macroeconomic environment.

The results of this study demonstrated that exports, GDP growth, and inflation exerted significant causal effects on domestic credit to the private sector, which is consistent with the findings of Büyükbaşaran et al. (2022), who reported that domestically driven credit expansions in Turkey were associated with inflationary pressures and currency depreciation. While their study highlighted the macroeconomic consequences of credit supply shocks, including constraints on accommodative monetary policy and limited growth effects, the present analysis extended this understanding by revealing the joint causal influence of exports and GDP growth in addition to inflation on private sector credit dynamics. Together, these findings indicated that domestic credit policies and macroeconomic performance interacted to shape the scale and stability of financial intermediation in emerging economies such as Turkey.

Büyükbaşaran et al. (2022) observed that domestically driven credit expansions coincided with higher inflation and currency depreciation, and with Çetin (2022) and Sezal and Şerbetçi (2023), who documented the influence of inflation and exter-

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nal debt on Turkey's financial variables. Research finding were also consistent with Demirel (2024) and Yiğitbaş (2025), as both studies identified significant effects of banking conditions, economic growth, external openness, and private sector investments on credit and growth dynamics, which aligns with the present study's findings that exports, GDP growth, and inflation exerted a causal influence on domestic credit to the private sector, indicating that macroeconomic and financial factors jointly shaped credit allocation and contributed to overall economic stability in Turkey.

Overall, the results underscore that export performance, sustained economic growth, and price stability are critical determinants of private sector credit dynamics. The findings carry notable policy implications: enhancing export competitiveness, maintaining stable economic expansion, and controlling inflation can strengthen financial intermediation and support private sector development, while careful macroeconomic management is necessary to prevent credit market overheating and ensure long-term financial stability.

CONCLUSION

This study analyzed the impact of key macroeconomic variables – exports, GDP growth, and inflation – on domestic credit to the private sector in Turkey. The empirical findings from the Toda–Yamamoto Granger causality tests demonstrated that exports ($\chi^2 = 15.483$, $p < 0.001$), GDP growth ($\chi^2 = 10.540$, $p = 0.001$), and inflation ($\chi^2 = 14.211$, $p < 0.001$) each exerted a statistically significant causal influence on domestic credit, indicating that variations in trade activity, economic performance, and price levels are critical determinants of credit dynamics. These results underscored the strong interconnection between credit availability and broader macroeconomic conditions, highlighting the role of the banking sector as a transmission channel for macroeconomic developments.

The findings suggest that policies aimed at enhancing export competitiveness, sustaining stable economic growth, and maintaining price stability are essential for promoting the development of private sector credit. Moreover, coordinated macroeconomic and financial management is necessary to ensure balanced credit expansion, mitigate systemic risks, and support long-term financial stability. Overall, the study emphasizes the importance of evidence-based and integrated economic policies in fostering a resilient and efficient credit system capable of supporting sustainable economic growth in Turkey.

AUTHOR CONTRIBUTIONS

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DECLARATION OF GENERATIVE AI IN THE WRITING PROCESS

In preparing this manuscript, the authors used AI-based tools exclusively for language editing and stylistic refinement. After use, the authors reviewed and edited the text and bear full responsibility for its content. All theoretical, analytical, and empirical results were generated by the authors using established econometric software, such as EViews.

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