

## **Credibility erosion and exchange rate pass-through in Türkiye**

**Umit BULUT**

Kirsehir Ahi Evran University, Türkiye  
ubulut@ahievran.edu.tr

**Okan DADALI**

Kirsehir Ahi Evran University, Türkiye  
dadaliokan2000@gmail.com

**Azra Asel BAYRAK**

Kirsehir Ahi Evran University, Türkiye  
bayrak.azraasel@ogr.ahievran.edu.tr

**Abstract.** *This study aims to examine the impact of the erosion of the Central Bank of the Republic of Türkiye (CBRT)'s credibility on the pass-through of the exchange rates to domestic prices in Türkiye, utilizing data from January 2006 to June 2025. Following the assessment of the stationarity levels of the variables, cointegration is identified in the model, and long-term coefficients are computed. The outputs demonstrate that a rise in exchange rates in Türkiye results in an escalation in domestic prices, and the credibility gap of the CBRT exacerbates this effect. Put differently, the degree of the pass-through of the exchange rates to domestic prices is amplified by a decline in the CBRT's credibility. The research discusses these findings.*

**Keywords:** Central Bank of the Republic of Türkiye; credibility; credibility gap; exchange rate pass-through; inflation.

**JEL Classification:** C22, E58, F41.

## 1. Introduction

The significance of the pass-through of exchange rates (ERs) to domestic prices, also referred to as ER pass-through (ERPT), has increased for open economies in the wake of the collapse of the Bretton Woods system, which was founded on a fixed ER regime (Faryna, 2016; Balcilar et al., 2021). Hence, there have been numerous studies conducted on this subject. The extent to which a change in ERs is reflected in domestic prices through the import price index is referred to as ERPT (Ghosh, 2013; Dedeoglu and Kaya, 2014; Anh et al., 2021; Phuc and Duc, 2021). ERPT is crucial for maintaining macroeconomic stability and informing monetary policy decisions (Kurtovic et al., 2021; Nagengast et al., 2021). In this setting, central banks (CBs) require data on the extent of ERPT to effectively address ER shocks that can induce inflationary consequences (Dedeoglu and Kaya, 2014). Certain research has indicated a decrease in ERPT for different countries (Choudhri and Hakura, 2006; Ihrig et al., 2006; Zorzi et al., 2007; Devereux and Yetman, 2010; Ha et al., 2020). Gagnon and Ihrig (2004), Mishkin and Schmidt-Hebbel (2007), and Mishkin (2008) ascribe this decline to the enhanced credibility of CBs. When a CB is firmly dedicated to maintaining low inflation, the influence of a change in ERs on domestic prices is minimal, as economic agents trust that contractionary monetary policy will be implemented by the CB when required, thereby not significantly altering their inflation expectations (IEs). Consequently, the credibility of a CB can influence ERPT (Carriere-Swallow et al., 2016).

In Türkiye, a small open economy, the inflation rate has escalated markedly, especially in recent years. This increase has significantly undermined the reputation and credibility of the Central Bank of the Republic of Türkiye (CBRT), whose principal aim is to achieve and maintain price stability. Due to the increase in inflation rates, recent research has investigated ERPT and found a significant pass-through effect from ERs to domestic prices (Tunc and Kilinc, 2018; Fendoğlu et al., 2020; Akgunduz et al., 2021; Bilgili et al., 2021, 2024; Gayaker et al., 2021; Orhan and Türel, 2022; Ilhan et al., 2023; Saygılı, 2023; Bulut et al., 2025). Among these studies, only Gayaker et al. (2021) concentrated on ERPT by incorporating the credibility of the CBRT into their model. However, this study analyzed the direct impact of credibility on the inflation rate rather than its influence on the ERPT mechanism.

This study will investigate the impact of the CBRT's credibility on ERPT by utilizing the "moderator variable" approach that is commonly employed in statistical analyses. When the interaction between two variables is also influenced by a third variable, a moderator variable is included in the empirical model (Katircioğlu and Taşpınar, 2017). Put differently, a moderator variable influences the strength of the association between the dependent variable and the regressor in a model. In this perspective, the diminishing credibility of the CBRT, especially in recent times, can influence the extent of ERPT in Türkiye. Within this scope, it is hypothesized in the study that the credibility of the CBRT can influence the extent to which the changes in ERs are transferred to domestic prices in Türkiye.

The paper utilizes monthly data over the period January 2006-July 2025. The data set commences in 2006, since the CBRT has implemented the inflation targeting (IT) regime/strategy since 2006. This study's primary strength lies in being the inaugural analysis of the influence of the CBRT's credibility on the ERPT process in Türkiye. This aspect of the investigation could make a valuable contribution to the existing body of literature.

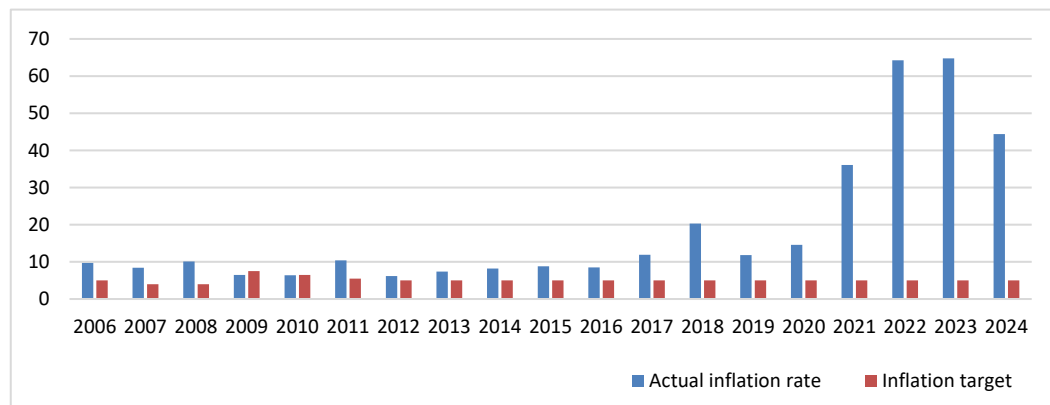
The rest of the paper is as follows: Section 2 illustrates the erosion in the credibility of the CBRT. Model and data are given in Section 3. The methodological approaches, along with the outputs of the empirical analyses, are presented in Section 4. Section 5 concludes the paper.

## 2. Credibility Erosion of the CBRT

Currently, there exists a near-universal agreement on implementing monetary policy within the IT strategy (Bulut, 2023). A CB that adopts the IT framework establishes a specific numerical inflation target and endeavors to achieve this target by utilizing all pertinent economic information (Svensson, 2000). The starting point for the IT strategy is the CB's ability to harmonize the public's IEs with its own inflation target, as IEs significantly influence wage negotiations and price adjustments (Carrasco and Ferreiro, 2013; Soybilgen and Yazgan, 2017). In other words, as IEs are the primary driver for inflation due to short-term price rigidities (Svensson, 1997; Bofinger et al., 2001), a CB employs monetary policy instruments to steer IEs towards the inflation target. If the CB is reputable and reliable, the inflation target will be the principal factor influencing IEs (Bulut, 2020). Hence, IEs will be minimally affected by a shock in energy prices, aggregate demand, or ERs (Bernanke, 2007; Mishkin, 2007; Gerlach et al., 2011). Within this frame, the extent to which IEs align with the inflation target is an essential measure of the CB's credibility (Çiçek and Akar, 2014). Put differently, IEs are well-anchored when they are close to the inflation target (Gürkaynak et al., 2010). In the monetary economics literature, the notion of credibility gap (CG) has been proposed to assess the credibility of a CB. Accordingly, the CG can be defined as the difference between year-end annual IEs and the year-end annual inflation target (Blinder, 2000; Lyziak, 2007).

The CBRT has implemented monetary policy under IT since 2006. An analysis of the actual inflation rates and inflation targets from 2006 to 2024 reveals that the CBRT consistently failed to meet its inflation targets. Figure 1 exhibits inflation rates and inflation targets in Türkiye during the period 2006-2024.

**Figure 1:** Actual inflation rates and inflation targets in Türkiye (%)

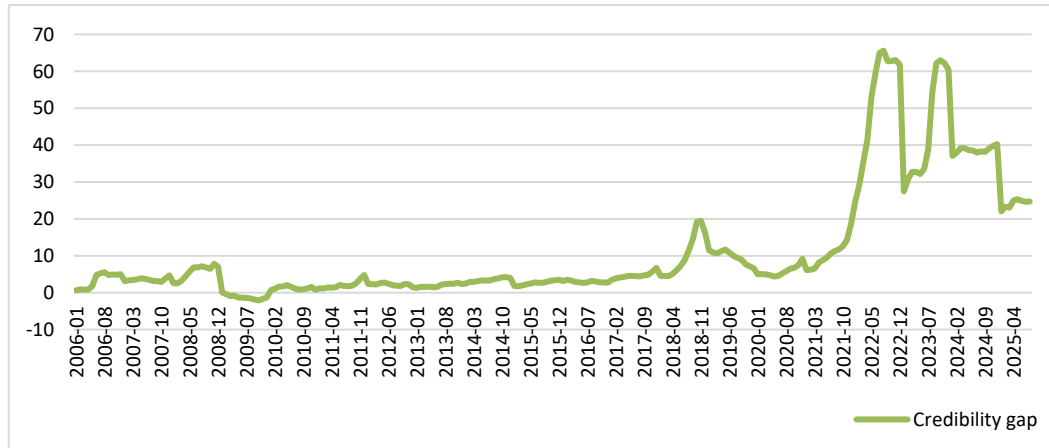


**Note:** Actual inflation rates and inflation targets are calculated through the consumer price index.

**Source:** CBRT (2025)

As is illustrated in the figure, during the period 2006-2024, only the inflation rates in 2009 and 2010 remained below the announced inflation targets. Besides, actual inflation rates have significantly deviated from the inflation targets in recent years. For instance, Türkiye's inflation target has been 5% since 2012; however, the actual inflation rates in 2022 and 2023 were 64.27% and 64.77%, respectively. Despite the fact that the inflation rate decreased to 44.38% in 2024, it remained significantly higher than the inflation target. Even though inflation is influenced by causes beyond monetary policy, resulting in CBs having limited control over it (Svensson, 1997), the CBRT, which is responsible for achieving and maintaining price stability, has been unable to achieve its inflation targets. Therefore, it is essential to evaluate the credibility of the CBRT. The CG of the CBRT for the period January 2006-August 2025 is illustrated in Figure 2. Two significant discoveries are illustrated in this figure. First, the CG of the CBRT was always positive during the observed period, indicating that IEs were higher than inflation targets. Second, there was a substantial decline in credibility, particularly in recent years, which corresponds to the notable deviation of actual inflation rates from target inflation rates.

**Figure 2:** *The credibility gap of the CBRT*



**Notes:** Credibility gap is the difference between year-end IEs calculated based on the CPI and the year-end inflation target. IEs are obtained through the survey of market participants.

**Source:** CBRT (2025)

Considering high inflation rates in Türkiye and the diminishing credibility of the CBRT, it is vital to investigate the possible effects of this credibility loss on the ERPT process in Türkiye. Thus, both the degree of ERPT and whether this pass-through is affected by the CBRT's credibility loss can be determined.

### 3. Model and Data

This research investigates the influence of the CBRT's credibility on ERPT in Türkiye. The study uses the CBRT's CG as the moderator variable and estimates an econometric model. How the CBRT's CG is used as the moderator variable can be illustrated in Figure 3.

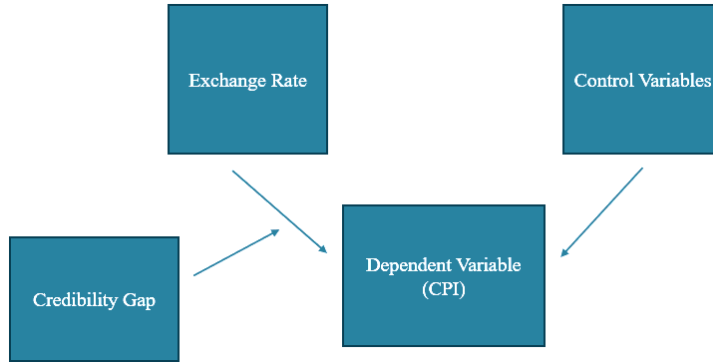
**Figure 3:** *The illustration of the moderator variable in the model*

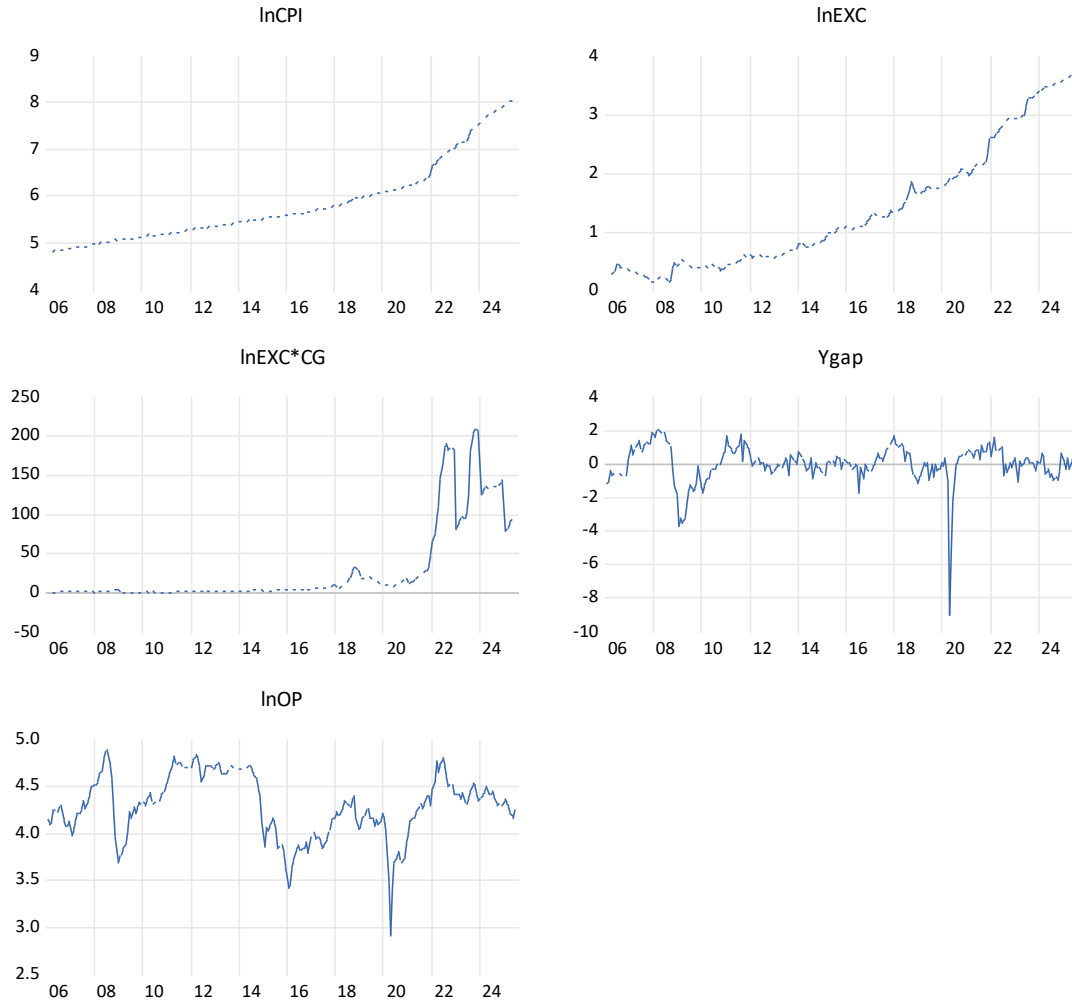
Figure 3 exhibits that the CBRT's CG serves as a moderator variable that is capable of modifying the impact of the ER on domestic prices. The study also employs output gap and oil prices as control variables in the empirical model. The extent of inflationary pressures in an economy can be deduced from the output gap, which serves as an indicator of the demand and supply components of economic activities (Jahan & Saber Mahmud, 2013).

Consequently, the output gap is integrated into the model. Given that energy sources are essential for production activities and that Türkiye predominantly imports energy to meet its demands, the model incorporates oil prices as well. Within this scope, the following model is estimated in this paper:

$$\ln \text{CPI}_t = \delta_0 + \delta_1 \ln \text{EXC}_t + \delta_2 (\ln \text{EXC}_t * \text{CG}_t) + \delta_3 Y_t^{\text{gap}} + \delta_4 \ln \text{OP}_t + \varepsilon_t \quad (1)$$

where CPI, EXC, CG,  $Y^{\text{gap}}$ , OP, and  $\varepsilon$  respectively denote the consumer price index (2003=100), the USD/TRY ER (TRY units per unit of USD), the CG of the CBRT, the output gap computed through the seasonally adjusted industrial production index (%), oil price (Europe Brent spot price FOB, USD per barrel), and the error term. Monthly data over the period 2006:M01-2025:M06 are utilized in the paper. Data for consumer prices and the ER are received from the CBRT (2025). The CG is calculated as the difference between the year-end IE and the year-end inflation target (see Figure 2).

The seasonally adjusted industrial production index extracted from the CBRT (2025) is filtered through the method of Hodrick and Prescott (1997) to compute the output gap. Oil price data are received from the US Energy Information Administration (2025). While the CPI, EXC, and OP series are represented in the model with their natural logarithmic values represented by  $\ln$ , the output gap, which is calculated as a percentage, is represented in the model with its original values. Time series dynamics of the variables under consideration are exhibited in Figure 4.

**Figure 4:** Time series dynamics of the variables

As is observed through Figure 3,  $\ln\text{CPI}$  and  $\ln\text{EXC}$ , which have been increasing steadily throughout the observation period, began to increase at a faster pace in 2022. This suggests that there may be a robust correlation between the two variables. The  $\ln\text{EXC} \cdot \text{CG}$  series has experienced a significant increase in recent periods as a result of the accelerated spike in the CG. The  $\text{Y}^{\text{gap}}$  series fluctuates around zero as expected, because the level of economic activity sometimes exceeds its potential and sometimes falls below it. Similar to the movement of  $\text{Y}^{\text{gap}}$ ,  $\ln\text{OP}$  fluctuates around a specific average. These results suggest that the  $\text{Y}^{\text{gap}}$  and  $\ln\text{OP}$  series may be stationary, whereas the other series may not be stationary.

#### 4. Methods and Results

Before estimating coefficients, it is essential to conduct unit root tests for determining the degrees of stationarity/integration of variables in time series analysis in order to prevent

the potential spurious regression problem. The ADF unit root test of Dickey and Fuller (1981), the PP unit root test of Phillips and Perron (1988), and the ZA unit root test of Zivot and Andrews (1992) are performed in the paper. The ADF and PP unit root tests do not account for structural breaks in the series, whereas the ZA unit root test includes an endogenously determined structural break. Furthermore, all tests are based on the null hypothesis of a unit root in contrast to the alternative hypothesis of stationarity.

**Table 1:** ADF, PP, and ZA unit root tests

| Variable         | ADF      |                      | PP      |                      | ZA      |                      |
|------------------|----------|----------------------|---------|----------------------|---------|----------------------|
|                  | Level    | 1 <sup>st</sup> dif. | Level   | 1 <sup>st</sup> dif. | Level   | 1 <sup>st</sup> dif. |
| lnCPI            | 1.572    | -8.383*              | 2.068   | -8.460*              | -4.086  | -8.739*              |
| lnUSD            | -0.988   | -11.375*             | -1.002  | -9.842*              | -3.068  | -16.884*             |
| lnUSD*CG         | -2.052   | -4.301*              | -2.729  | -12.760*             | -6.445* | -13.204*             |
| Y <sup>gap</sup> | -5.750*  | 17.425*              | -5.750* | -21.273*             | -6.064* | -11.512*             |
| lnOP             | -3.514** | -10.514*             | -2.919  | -10.538*             | -4.719  | -11.130*             |

**Note:** \* and \*\* show 1% and 5% statistical significance, respectively.

The empirical outputs for the unit root tests are illustrated in Table 1. Accordingly, all tests indicate that lnCPI and lnUSD are stationary at their first difference forms, implying they are integrated of order one (I(1)). While ADF and PP tests' results reveal lnUSD\*CG is stationary at its first difference form, the ZA test's finding denotes it is stationary at the level. Hence, this variable can be I(0) or I(1) based on the findings of the unit root tests. Y<sup>gap</sup> is stationary at the level according to all unit root tests, meaning it is I(0). Finally, lnOP exhibits stationarity at the level with regard to the ADF unit root test, whereas the PP and ZA unit root tests' results indicate that it is stationary at its first difference value. Therefore, similar to lnUSD\*CG, lnOP can be I(0) or I(1), contingent upon the results of the unit root tests.

In time series analysis, the autoregressive distributed lag (ARDL) approach to cointegration can be utilized when the dependent variable is I(1) and the regressors are either I(0) or I(1). As the results of the unit root tests strongly point out that the ARDL approximation must be utilized to search for cointegration in the established model, this study uses this technique to research whether cointegration exists in the model.

The ARDL methodology has two phases. The initial phase is to check the existence of cointegration in the model by the bounds test produced by Pesaran et al. (2001). In the second phase, if there exists cointegration in the model, the long-term parameters are computed by way of the following model (Pesaran and Shin, 1999):

$$y_t = \alpha + \sum_{i=1}^p \alpha_i y_{t-i} + \sum_{i=0}^q \beta_i x_{t-i} + u_t \quad (2)$$

The long-term coefficients are calculated via the regression model in Equation (2). Additionally, one estimates the short-run relationships via the following model depicted below:

$$\Delta y_t = \theta_0 + \theta_1 EC_{t-1} + \sum_{i=1}^p \delta_i \Delta y_{t-i} + \sum_{i=0}^q \lambda_i \Delta x_{t-i} + u_t \quad (3)$$

Eq. (3) is an error correction model. Accordingly,  $\theta_1$  indicates the extent to which short-run deviations are rectified in the long run. Consequently, it must be negative and significant to validate cointegration.

**Table 2:** *ARDL approach to cointegration*

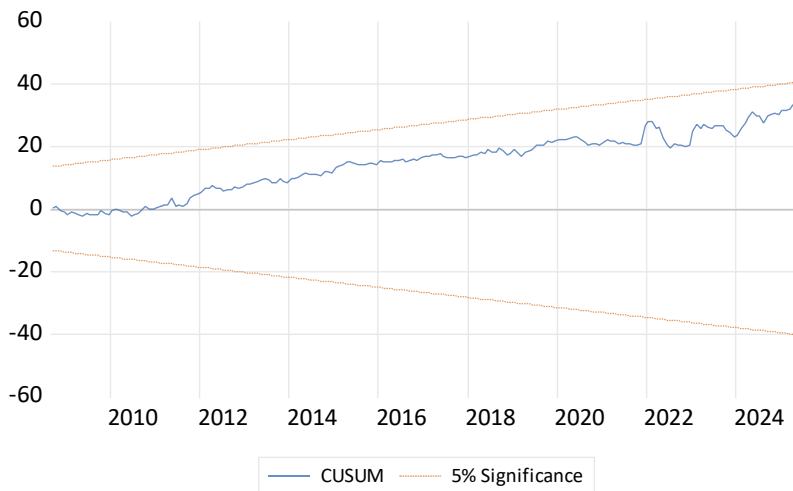
| Panel A: Cointegration result                                                                                                                         |             |                |         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------|---------|
| Test stat.                                                                                                                                            | 4.147**     |                |         |
| Panel B: Coefficient estimations                                                                                                                      |             |                |         |
| Variable                                                                                                                                              | Coefficient | Standard error | t-stat. |
| Intercept                                                                                                                                             | 3.819*      | 0.406          | 9.579   |
| lnUSD                                                                                                                                                 | 0.816*      | 0.058          | 13.970  |
| lnUSD*CG                                                                                                                                              | 0.003*      | 0.001          | 2.725   |
| Y <sub>gap</sub>                                                                                                                                      | 0.004       | 0.005          | 0.705   |
| lnOP                                                                                                                                                  | 0.226**     | 0.090          | 2.502   |
| Panel C: Diagnostic tests                                                                                                                             |             |                |         |
| R <sup>2</sup> = 0.99, $\bar{R}^2$ = 0.99, F-ist. = 76111.070 (0.000), $\chi^2_{\text{BGSC}} = 0.240$ (0.886), $\chi^2_{\text{HHT}} = 28.039$ (0.214) |             |                |         |

**Note:** The error correction model's results indicate the coefficient of the one-period lagged error correction term is significant and negative.  $\chi^2_{\text{BGSC}}$  and  $\chi^2_{\text{HHT}}$  respectively indicate the Breusch-Godfrey serial correlation test and the Harvey heteroskedasticity test statistics. Values in parentheses indicate probability values.

\* and \*\* show 1% and 5% statistical significance, respectively.

Table 2 demonstrates the outputs of the ARDL cointegration test. As is seen in panel A of the table, the null hypothesis of no cointegration can be rejected at 5% level, meaning that a cointegration relationship exists in the established model. This finding also implies that the long-run coefficients could be estimated. Additionally, panel B of the table demonstrates the long-run parameters for the regressors. These findings are as follows: (i) The USD/TRY ER has a positive impact on consumer prices ( $\hat{\delta}_1 = 0.816$ ,  $p < 0.01$ ). (ii) The variable derived from the multiplication of the USD/TRY ER and the CG of the CBRT positively affects consumer prices ( $\hat{\delta}_2 = 0.003$ ,  $p < 0.01$ ). (iii) Output gap has no impact on consumer prices ( $\hat{\delta}_3 = 0.004$ ,  $p > 0.10$ ). (iv) Consumer prices positively respond to an increase in oil prices ( $\hat{\delta}_4 = 0.226$ ,  $p < 0.05$ ).

The long-run parameters' stability can be assessed using the CUSUM and CUSUM-Q tests of Brown et al. (1975). It can be declared that the ARDL model produces efficient results when the CUSUM and CUSUM-Q test statistics are within the boundaries.

**Figure 5:** *CUSUM and CUSUM-Q tests*

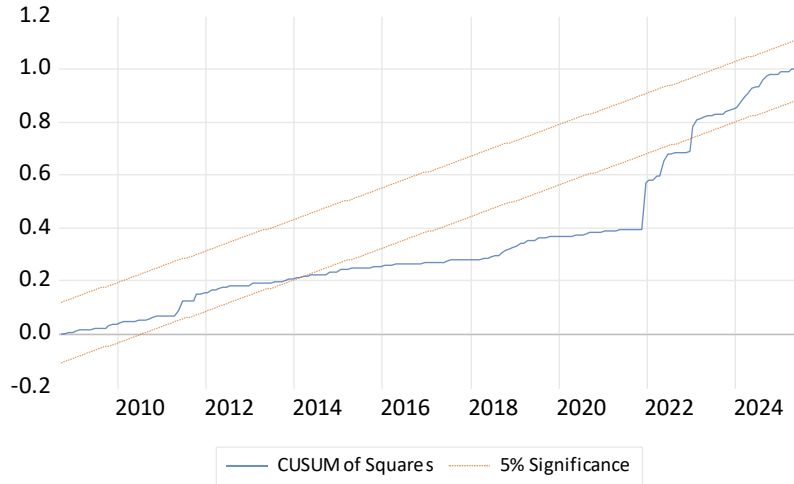


Figure 5 graphically illustrates the outcomes of the CUSUM and CUSUM-Q tests. As is seen, while the CUSUM test statistic remained within the limits throughout the observed period, the CUSUM-Q test statistic went outside the limits but later returned within the boundaries. Consequently, the results of these tests exhibit the long-term coefficient results derived from the ARDL approach are stable.

Upon estimating the coefficients using one approach, it is feasible to employ an alternative method to assess the robustness of the outputs obtained from the initial method. This research uses the dynamic ordinary least squares (DOLS) technique established by Saikkonen (1991) and Stock and Watson (1993) to evaluate the robustness of the results derived from the ARDL approach. The DOLS method is resilient to serial correlation and endogeneity issues and can be presented as follows:

$$y_t = \beta_0 + \beta_1 x_t + \sum_{i=-q}^p \gamma_i \Delta x_{t+i} + \varepsilon_t \quad (4)$$

where  $y$  stands for the dependent variable,  $x$  denotes regressors,  $q$  and  $p$  are respectively the optimal lag and lead lengths,  $\Delta$  shows the first difference operator, and  $\varepsilon$  indicates the error term.

**Table 3:** DOLS estimator

| Variable         | Coefficient | Standard error | t-stat. |
|------------------|-------------|----------------|---------|
| Intercept        | 4.192*      | 0.171          | 24.533  |
| lnUSD            | 0.648*      | 0.029          | 21.895  |
| lnUSD*CG         | 0.002*      | 0.001          | 3.880   |
| $Y^{\text{gap}}$ | -0.002      | 0.005          | -0.531  |
| lnOP             | 0.151*      | 0.037          | 4.072   |

\* shows 1% statistical significance.

The results obtained through the DOLS estimator are demonstrated in Table 3. Accordingly, lnUSD, lnUSD\*CG,  $Y^{\text{gap}}$ , and lnOP have the estimations of 0.648, 0.002, -0.002, BS 0.151, respectively. Besides, all coefficients except the coefficient of  $Y^{\text{gap}}$  are statistically significant. These findings indicate that consumer prices in Türkiye are positively associated with the USD/TRY ER, the variable derived from the multiplication

of the USD/TRY ER and the CG of the CBRT, and oil prices, and are not related to the output gap.

The results of the ARDL approach and the DOLS estimator imply a significant pass-through influence from the ER to domestic prices in Türkiye. Besides, they show that the CG of the CBRT amplifies the cumulative impact of the ER on domestic prices. In other words, an escalation in the CG results in heightened ERPT. The pronounced ERPT and the insignificant coefficient of the output gap suggest that Türkiye's high inflation is not fueled by demand but is instead driven by ERs and other costs. In other words, inflationary pressures fueled by demand resulting from Türkiye's rapid economic expansion do not occur. Lastly, it can be contended that the upward impact of oil prices on domestic prices is primarily due to the fact that an increase in oil prices results in an increase in the prices of petroleum products and transportation costs.

The results of the study, which suggest the presence of a robust pass-through effect in Türkiye, are corroborated by the outputs of the following studies: Tunc and Kilinc (2018), Fendoğlu et al. (2020), Akgunduz et al. (2021), Bilgili et al. (2021, 2024), Gayaker et al. (2021), Orhan and Türel (2022), İlhan et al. (2023), Saygılı (2023), and Bulut et al. (2025). Additionally, Gayaker et al. (2021) and this study demonstrate that the CG is a factor that contributes to the increase in domestic prices, even though Gayaker et al. (2021) employed a distinct methodology for modeling the impact of the CG on domestic prices.

## 5. Conclusion

Small open economies that are more susceptible to disruptions in international markets and cannot influence prices in those markets are particularly interested in ERPT. Recent research has revealed that the extent of this pass-through is reduced when a CB has a high level of credibility. These results are attributable to the public's confidence in the CB's ability to preserve price stability. Accordingly, the CB can manage IEs against an increase in ERs. Consequently, it can be argued that ERPT can be influenced by the CB's credibility.

In recent years, inflation rates in Türkiye have increased significantly, and the CBRT has encountered significant challenges in managing IEs. Consequently, this study investigates the extent to which the ER passes through to domestic prices in Türkiye using monthly data from 2006:M01 to 2025:M06. The CG of the CBRT, which can influence the interaction between domestic prices and the ER, is employed as a moderator variable in this context. After performing the unit root tests, which indicate that the variables have different orders of integration, the cointegration relationship between the variables is examined. Following the discovery of cointegration, long-run parameters are estimated.

The results indicate that an increase in the ER results in an increase in domestic prices and that the CG of the CBRT amplifies this effect. In other words, ERPT is exacerbated by a decrease in the CBRT's credibility. Therefore, the less confidence there is that the CBRT will meet its inflation target, the stronger the pass-through of the ER to domestic prices becomes in Türkiye. It is widely accepted that if IEs are well anchored due to a highly credible CB, the reaction of domestic prices to ER shocks will lessen (Mishkin and

Schmidt-Hebbel, 2007). Besides, in a country with high CB credibility, ERPT can be low, which makes it easier for monetary policy to control inflation (Carriere-Swallow et al., 2016). In this way, the strong commitment of a credible CB to sustaining low and stable inflation has been a crucial element in the limited transmission of the ER shocks to domestic prices over the last decades (Ha et al., 2020). However, in Türkiye, where the CBRT has a serious credibility problem and IEs are not well-anchored, the erosion of the CB's credibility intensifies the impact of an increase in ERs on domestic prices, contributing to high inflation rates. Consequently, this paper argues that the CBRT should (i) employ its monetary policy instruments in accordance with its inflation target, (ii) manage IEs much more effectively, and (iii) endeavor to align IEs with the inflation target. Besides, to mitigate the escalation of domestic prices resulting from an increase in the ER due to heightened prices of imported inputs and final goods and services, policymakers in Türkiye should implement policies that can reduce the Turkish economy's dependence on imports.

### Conflict of interest

The authors declare that they have no known competing interests or personal relationships that could have appeared to influence the work reported in this paper.

### Original Submission Statement

The manuscript has not been previously published in its current form or a substantially similar form and is not currently under review by another journal.

**Data availability:** The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

**Funding:** This research was funded by TÜBİTAK under project number 1919B012411388.

**Acknowledgements:** Not applicable

### List of Abbreviations

| Abbreviations | Explanation                            |
|---------------|----------------------------------------|
| ADF           | Augmented Dickey-Fuller                |
| ARDL          | Autoregressive distributed lag         |
| CB            | Central bank                           |
| CBRT          | Central Bank of the Republic of Turkey |
| CG            | Credibility gap                        |
| DOLS          | Dynamic ordinary least squares         |
| ER            | Exchange rate                          |
| ERPT          | Exchange rate pass-through             |
| IE            | Inflation expectation                  |
| IT            | Inflation targeting                    |
| PP            | Phillips-Perron                        |
| ZA            | Zivot-Andrews                          |

---

## References

---

- Akgunduz, Y.E., Bastan, E.M., Demiroglu, U., and Tumen, S. (2021). Product-level estimates of exchange rate pass-through: evidence from Turkey. *The World Economy*, 44(7), 2203-2226.
- Anh, V.T., Quan, L.T.T., Phuc, N. van, Chi, H.M., and Duc, V.H. (2021). Exchange rate pass-through in ASEAN countries: an application of the SVAR model. *Emerging Markets Finance and Trade*, 57(1), 21-34.
- Balcilar, M., Roubaud, D., Usman, O., and Wohar, M.E. (2021). Testing the asymmetric effects of exchange rate pass-through in BRICS countries: does the state of the economy matter? *World Economy*, 44(1), 188-233.
- Bernanke, B.S. (2007). Inflation expectations and inflation forecasting. <<https://www.federalreserve.gov/newsevents/speech/bernanke20070710a.htm>> [Accessed September 1, 2025].
- Bilgili, F., Ünlü, F., Gençoğlu, P., and Kuşkaya, S. (2021). Modeling the exchange rate pass-through in Turkey with uncertainty and geopolitical risk: a Markov regime-switching approach. *Applied Economic Analysis*, 30(88), 52-70.
- Bilgili, F., Kuşkaya, S., Gençoğlu, P., Ünlü, F., and Magazzino, C. (2024). Exchange rate pass-through at high and low frequencies in Turkey: a continuous wavelet transform model approach. *Journal of Economic Structures*, 13(1), 21.
- Blinder, A.S. (2000). Central-bank credibility: why do we care? How do we build it? *American Economic Review*, 90(5), 1421-1431.
- Bofinger, P., Reischle, J., and Schachter, A. (2001). *Monetary Policy: goals, institutions, strategies, and instruments*. New York: Oxford University Press.
- Brown, R.L., Durbin, J., and Evans, J.M. (1975). Techniques for testing the constancy of regression relationships over time. *Journal of the Royal Statistical Society Series B: Statistical Methodology*, 37(2), 149-163.
- Bulut, U. (2020). The credibility problem of the Central Bank of the Republic of Turkey: An empirical investigation (in Turkish). *Bulletin of Economic Theory and Analysis*, 5(2), 1-15.
- Bulut, U. (2023). Measuring the impacts of monetary policy in Turkey: an extended structural vector autoregressive model with structural breaks. *International Journal of Economic Policy Studies*, 17(1), 117-132.
- Bulut, U., Togay, S., and Ertugrul, H.M. (2025). Price rigidities, central bank credibility, and exchange rate pass-through: the case of Türkiye. *Ekonomik Yaklasim*, 36(136), 267-291.
- Carrasco, C.A., and Ferreira, J. (2013). Inflation targeting and inflation expectations in Mexico. *Applied Economics*, 45(23), 3295-3304.
- Carriere-Swallow, M.Y., Gruss, B., Magud, M.N.E., and Valencia, M.F. (2016). Monetary policy credibility and exchange rate pass-through. *IMF Working Paper*, 240.
- Central Bank of the Republic of Türkiye (2025). Electronic data delivery system. <<https://evds2.tcmb.gov.tr/>> [Accessed September 15, 2025].
- Choudhri, E.U., and Hakura, D.S. (2006). Exchange rate pass-through to domestic prices: does the inflationary environment matter? *Journal of International Money and Finance*, 25(4), 614-639.
- Çiçek, S., and Akar, C. (2014). Do inflation expectations converge toward inflation target or actual inflation? evidence from expectation gap persistence. *Central Bank Review*, 14, 15-21.

- Dedeoglu, D., and Kaya, H. (2014). The evolution of exchange rate pass-through in Turkey: does inflation targeting matter? *Afro Eurasian Studies*, 3(1), 26–33.
- Devereux, M.B., and Yetman, J. (2010). Price adjustment and exchange rate pass-through. *Journal of International Money and Finance*, 29(1), 181–200.
- Dickey, D., and Fuller, W. (1981). Likelihood ratio statistics for autoregressive time series with a unit root. *Econometrica*, 49(4), 1057–1072.
- Energy Information Administration (2025). Petroleum & other liquids. <<https://www.eia.gov/dnav/pet/hist/RBRTED.htm>> [Accessed September 15, 2025].
- Faryna, O. (2016). Nonlinear exchange rate pass-through to domestic prices in Ukraine. *Visnyk of the National Bank of Ukraine*, 236, 30–42.
- Fendoğlu, S., Çolak, M.S., and Hacıhasanoğlu, Y S. (2020). Foreign-currency debt and the exchange rate pass-through. *Applied Economics Letters*, 27(8), 657–666.
- Gagnon, J.E., and Ihrig, J. (2004). Monetary policy and exchange rate pass-through. *International Journal of Finance and Economics*, 9(4), 315–338.
- Gayaker, S., Ağaslan, E., Alkan, B., and Çiçek, S. (2021). The Deterioration in credibility, destabilization of exchange rate and the rise in exchange rate pass-through in Turkey. *International Review of Economics and Finance*, 76(June 2020), 571–587.
- Gerlach, P., Hordahl, P., and Moessner, R. (2011). Inflation expectations and the Great Recession. *BIS Quarterly Review*, 39-51.
- Ghosh, A. (2013). Exchange rate pass through, macro fundamentals and regime choice in Latin America. *Journal of Macroeconomics*, 35(1), 163–171.
- Gürkaynak, R.S., Levin, A., and Swanson, E. (2010). Does inflation targeting anchor long-run inflation expectations? Evidence from the US, UK, and Sweden. *Journal of the European Economic Association*, 8(6), 1208-1242.
- Ha, J., Stocker, M.M., and Yilmazkuday, H. (2020). Inflation and exchange rate pass-through. *Journal of International Money and Finance*, 105, 102187.
- Hodrick, R.J., and Prescott, E.C. (1997). Postwar US business cycles: an empirical investigation. *Journal of Money, Credit, and Banking*, 29(1), 1-16.
- Ihrig, J.E., Marazzi, M., and Rothenberg, A.D. (2006). Exchange rate pass-through in G-7 countries, Federal Reserve System, *International Finance Discussion Paper* 851.
- Ilhan, A., Akdeniz, C., and Özdemir, M. (2023). Time-varying exchange rate pass-through to domestic prices: Evidence from Turkey. *Romanian Journal of Economic Forecasting*, 26(3), 162-182.
- Katircioğlu, S.T., and Taşpınar, N. (2017). Testing the moderating role of financial development in an environmental Kuznets curve: empirical evidence from Turkey. *Renewable and Sustainable Energy Reviews*, 68, 572-586.
- Kwiatkowski, D., Phillips, P.C., Schmidt, P., and Shin, Y. (1992). Testing the null hypothesis of stationarity against the alternative of a unit root: How sure are we that economic time series have a unit root? *Journal of Econometrics*, 54(1-3), 159-178.
- Lyziak, T., Mackiewicz, J., and Stanislawska, E. (2007). Central bank transparency and credibility: the case of Poland, 1998-2004. *European Journal of Political Economy*, 23(1), 67-87.
- Mishkin, F.S. (2007). Inflation dynamics. *International Finance*, 10 (3), 317-334.
- Mishkin, F.S., and Schmidt-Hebbel, K. (2007). Does inflation targeting make a difference? *NBER Working Paper*, 12876.

- Mishkin, F.S. (2008). Exchange rate pass-through and monetary policy, *NBER Working Paper*, 13889.
- Orhan, A., and Türel, M. (2022). Asymmetries in exchange rate pass-through in Turkey: A threshold VAR analysis. *Prague Economic Papers*, 31(3-4).
- Pesaran, M.H., and Shin, Y. (1999). "An Autoregressive Distributed Lag Modelling Approach to Cointegration Analysis", In *Econometrics and econometric theory in the 20th century: the Ragnar Frisch centennial symposium*, ed. S. Strom, 371-413. Cambridge: Cambridge University Press.
- Pesaran, M.H., Shin, Y., and Smith, R.J. (2001). bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics*, 16(3), 289–326.
- Phillips, P.C.B., and Perron, P. (1988). Testing for a unit root in time series regression. *Biometrika*, 75(2), 335–346.
- Phuc, N. van, and Duc, V.H. (2021). Macroeconomics determinants of exchange rate pass-through: new evidence from the Asia-Pacific region. *Emerging Markets Finance and Trade*, 57(1), 5–20.
- Saikkonen, P. (1991). Asymptotically efficient estimation of cointegration regressions. *Econometric Theory*, 7(1), 1-21.
- Saygılı, H. (2023). Invoicing currency, exchange rate pass-through, and value-added trade: The case of Turkey. *International Journal of Finance & Economics*, 28(4), 4401-4419.
- Soybilgen, B., and Yazgan, E. (2017). An evaluation of inflation expectations in Turkey. *Central Bank Review*, 17(1), 31–38.
- Stock, J. H., and Watson, M. W. (1993). A simple estimator of cointegrating vectors in higher order integrated systems. *Econometrica*, 61, 783-820.
- Svensson, L.E. (1997). Inflation forecast targeting: Implementing and monitoring Inflation targets. *European Economic Review*, 41(6), 1111-1146.
- Svensson, L.E. (2000). How should monetary policy be conducted in an era of price stability?". *NBER Working Paper*, 7516.
- Tunc, C., and Kilinc, M. (2018). Exchange rate pass-through in a small open economy: a structural VAR approach. *Bulletin of Economic Research*, 70(4), 410–422.
- Zorzi, M.C., Hahn, E., and Sanchez, M. (2007). Exchange rate pass-through in emerging markets. *European Central Bank Working Paper*, 739.