ASSAM Uluslararası Hakemli Dergi
International Refereed Journal
e-ISSN: 2148-5879
Issue: 26,
Year: 2025

Gölge Dolar Uluslararası Ticareti ve Küresel Ekonomileri Nasıl Etkiler? Türkiye ve Diğer Ülkelerin Perspektifinden Tartışılması

How Does the Shadow Dollar Affect International Trade and Global Economies? Discussion from the Perspective of Turkey and Other Countries

Hasan BARDAKÇI[1]

1. Assoc. Prof. Harran University, Siverek Faculty of Applied Sciences, Department of International Trade and Logistics, Şanlıurfa, Turkey

E-mail: hasanbardakci@harran.edu.tr

https://orcid.org/0000-0002-6181-3115

https://doi.org/ 10.58724/assam.1593036

Özet

Bu çalışma, "Gölge Dolar" kavramının döviz kurları ve küresel ticaret üzerindeki etkilerini kapsamlı birt şekilde ele almaktadır. Makalede, gölge doların özellikle Türkiye ve diğer ekonomiler üzerindeki etkileri karşılaştırılmaktadır. Türkiye'nin dış borç yükü ve ticaret açığı gibi yapısal zorluklar, gölge doların ekonomik etkilerini daha da derinleştirebilmektedir. Ayrıca, Çin gibi büyük ekonomilerde, doların güçlenmesi genellikle ihracatçı sektörler için avantaj sağlayabilmektedir. Çin, doları lehine çevirebilirken, Avrupa Birliği ve diğer gelişmiş ekonomiler, döviz kuru değişikliklerine karşı daha dirençli olabilmektedir. Çalışma, bu küresel dinamiklerin ticaret dengesizlikleri, döviz piyasaları ve ekonomik ilişkiler üzerindeki etkilerini tartışarak, her ülkenin ekonomik yapısına göre farklı tepkiler verdiğini ortaya koymaktadır. Türkiye gibi ülkeler için döviz kurlarındaki artışlar, ekonomik baskılar yaratırken, büyük ekonomiler bu tür dışsal etkilerden daha az zarar görmektedir. Son olarak çalışma, gölge doların dünya ticaretine ve ekonomik yapıya olan etkilerinin, ülkelerin para politikaları ve ticaret stratejileri doğrultusunda farklılık gösterdiği için küresel ticaretin geleceğini şekillendiren önemli bir faktör olduğunu vurgulamaktadır.

Anahtar Kelimeler: Gölge Dolar, Türkiye, Döviz Kuru, Ekonomi, Para Politikası

Abstract

This paper provides an in-depth analysis of the effects of the "Shadow Dollar" on exchange rates and global trade. In particular, the paper compares the effects of the shadow dollar in Turkey and other economies. Structural challenges such as Turkey's external debt burden and trade deficit can exacerbate the economic effects of the shadow dollar. Moreover, in large economies such as China, a stronger dollar can often be beneficial for exporting sectors. While China may favor the dollar, the European Union and other advanced economies may be more resilient to exchange rate changes. The paper discusses the effects of these global dynamics on trade imbalances, foreign exchange markets and economic relations, and shows that each country responds differently depending on its economic structure. For countries like Turkey, exchange rate hikes create economic pressures, while large economies suffer less from such externalities. Finally, the study emphasizes that the effects of the shadow dollar on world trade and economic structure are an important factor shaping the future of global trade, as they differ according to countries' monetary policies and trade strategies.

Keywords: Shadow Dollar, Turkey, Exchange Rate, Economy, Monetary Policy

Article Type	Application Date	Admission Date
Research Article	28.11.2024	18.02.2025

To cite this article: Bardakçı, H. (2025). How Does the Shadow Dollar Affect International Trade and Global Economies? Discussion from the Perspective of Turkey and other Countries. ASSAM Uluslararası Hakemli Dergi(26), 29-35. https://doi.org/10.58724/assam.1593036

1.INTRODUCTION

The shadow dollar or shadow interest rate is a term used to assess the effectiveness of central banks' monetary policies when the nominal interest rate is near zero. This rate is very important as it affects the overall health of the economy and the volatility of exchange rates. In particular, a rise in shadow interest rates can lead to an appreciation of the US dollar. This can significantly affect trade dynamics around the world. The dollar's appreciation increase the cost of foreign trade, especially for emerging economies, which may lead to trade imbalances. Emerging economies, such as Turkey, are more vulnerable to the effects of the shadow dollar due to their sensitivity to exchange rate fluctuations. In Turkey's foreign trade structure, strong currency fluctuations often make imports more expensive and exports more competitive. However, Turkey's import-dependent economic structure negatively amplifies the effects of shadow dollar appreciation. In particular, Turkey, which imports energy and raw materials, could be severely affected by such price increases. On the other hand, Turkish exporting firms are able to sell products abroad at more attractive prices in the face of a stronger dollar, which could increase the competitiveness of foreign trade. However, the concentration of a large part of Turkey's foreign trade in sectors where the high costs of imported products can lead to economic imbalances.

However, for large exporting economies like China, a stronger shadow dollar could create further advantages in the global Market for large expoting economies like China As a country that can manage the yuan and has lower production costs, China can more easily overcome the challenges posed by a stronger dollar. China, which has a strong trade relationship with the US, could be in a more competitive position with a stronger US dollar, as Chinese export prices become more attractive in international markets with a stronger dollar. However, since China also imports a large share of energy and some raw materials, a rise in exchange rates could lead to cost pressures in certain sectors.
The situation is different in advanced economies such as the European Union (EU). The value of the euro against the US dollar is a determining factor in the exports of countries in this region. A stronger US dollar can make EU exports more expensive, but a weaker euro can also boost EU exports. For example, when Germany's high-quality engineering and automotive products are sold to the US, prices may become more expensive due to the strong dollar, but competitive prices in Europe can give an advantage in direct competition with companies producing in other developing countries. That is, the effects of the shadow dollar on foreign trade can vary depending on a country's economic structure and foreign exchange policies. Developing countries such as Turkey are more vulnerable to such externalities, while larger and more diversified economies such as China and European states may be more resilient to such shocks. These varying dynamics in global trade help illustrate how the shadow dollar influences trade patterns and economic power relations worldwide.

2.LITERATURE REVIEW

The concept of the shadow dollar stands out as a research area that attracts attention in the context of fixed exchange rates, trade restrictions and global trade balances. Looking at the academic studies on the shadow dollar or the shadow interest rate, Standaert (1985), in his study titled *"Exchange Constraint, Trade Deficit Suppression and the Shadow Price of Foreign Exchange in a fixed-Price Economy"*, argues that in fixed-price regimes, exchange constraints may create negative shadow exchange rates by suppressing trade deficits. The effect of trade restrictions on the shadow price of foreign exchange is analyzed in Chao and Yu (1999) *"Shadow Prices and Trade Restrictions in a Monetized Economy"* and the role of changes in the effective cash requirements of exportable goods on this price is discussed.

The effects of the dollar in the global financial system are detailed in Dafermos, Gabor and Michell (2022) *"Currency Swaps, Shadow Banks and the Global Dollar Footprint*". The paper argues that the Fed's unequal and hierarchical lender of last resort approach is insufficient for global financial stability. In contrast, Coquid'e, Lages and Shepelyansky (2022), in their article *"The Dollar-Yuan War 0n the World Trade Network"*, show that structural changes in the world trade network since 2010 have brought the Chinese yuan to the forefront.

The direct effects of the dollar on trade are discussed in Ma, Schmidt-Eisenlohr and Zhang's (2020) *"The Causal Impact of the Dollar on Trade"*. The study found that a 1% appreciation of the dollar affects import prices and reduces import volumes by 1.5% in countries that invoice entirely in dollar. In addition, Santanu and Wardani's (2023) paper titled *"What is the Impact of the US Dollar Exchange Rate on Foreign Direct Investment and the Balance of Trade?"* examined the positive effects of the US dollar on the balance of trade in Indonesia, but its negative effects on foreign direct investment.

Studies on the informal economy offer a different perspective. Gnangnon (2022), in his article titled *"Do Aid-for-Trade Flows Help Reduce the Shadow Economy in Recipient Countries?*", discusses the role of aid-for-trade in reducing the informal economy. Marmora (2021), *"Money Substitution in the Shadow Economy: International Panel Evidence Using Local Bitcoin Trade Volume"* showed that cryptocurrencies such as Bitcoin are more favored due to the demand for anonymity in relation to inflation expectations. Finally, on the calculation of shadow prices of non-traded goods, Boadway (1975) in his study *"Benefit-Cost Shadow Pricing in Open Economies: An Alternative Approach"* emphasized that the marginal foreign exchange costs of both traded and non-traded goods should be taken into account in this pricing. All these studies provide a strong academic framework for understanding the effects of the shadow dollar on foreign trade and world Trade.

3.IMPACTS ON FOREIGN TRADE

3.1.Exchange Rates and Trade Balance

The shadow dollar (shadow interest) rate may have asymmetric effects on the trade balance of trade. For example, an increase in the shadow interest rate may lead to an appreciation of the US dollar, which affects the trade balance with various countries differently (Tokmakçıoğlu et al., 2019). In Turkey's case, the dollar's appreciation increases import costs while increasing exporters' foreign exchange earnings. However, in an energy import-dependent country like Turkey, the appreciation of the dollar may widen the foreign trade deficit by increasing energy costs.

In contrast, the impact of dollar appreciation on large export-oriented economies such as China is different (Coquid'e, Lages and Shepelyansky, 2022). Although Chinese products priced in dollars become more expensive in export markets, China's production capacity and strong supply chains can mitigate the severity of this effect. For example, while Turkish textile exporters may gain a competitive advantage with China with the rise in the dollar, this advantage may be limited due to rising import costs and inflationary pressures.

Similarly, countries like Indonesia are affected differently by dollar appreciation. In Indonesia, FDI in US dollars may decline, but the trade balance may be positively affected by higher commodity prices. For example, Indonesian exports of commodities such as coal and palm oil could benefit from dollar appreciation. In contrast, Turkey's trade balance is more vulnerable to currency fluctuations and changes in the shadow dollar rate usually result in a negative trade balance (Yıldırım, Akdağ and Alola, 2022).

These asymmetric effects arise from differences in countries' economic structures and their position in global trade. Turkey, due to its import dependency and high current account deficit, is more negatively affected by dollar appreciation, whereas trade-surplus economies like China are better positioned to absorb these shifts. This underscores the need for further analysis to fully understand the complex impact of shadow interest rates on global trade.

3.2.Capital Inflows and Currency Value

A contraction in the US economy or a contractionary monetary policy can attract capital inflows, leading to an appreciation of the US dollar. This appreciation can make US exports more expensive and imports cheaper (Tokmakçıoğlu et al., 2019). For Turkey, contractionary monetary policies in the US often lead to capital outflows, as foreign investors look to US assets for higher returns.

This exerts pressure on exchange rates in emerging economies like Turkey, leading to the depreciation of the Turkish Lira. For example, an appreciating dollar would make Turkey's imports more costly, which could provide a competitive advantage for exporters. However, Turkey's high energy import dependence carries the risk of increasing the trade deficit with currency appreciation (Yıldırım, Akdağ and Alola, 2022).

The situation is different in advanced economies such as Canada. When capital inflows strengthen the US dollar after contractionary US monetary policies, the Canadian dollar usually depreciates against the US dollar. As a result, Canadian exports become more competitive, especially for exports to the US. However, Canada's status as an energy exporter makes it more dependent on changes in oil prices, which complicates the effects of currency movements on the balance of trade.

For a commodity exporter like Brazil, the appreciation of the US dollar may have a twofold effect. On the one hand, a rise in commodity prices in USD terms may increase Brazil's export revenues. On the other hand, a depreciation of the local currency may increase Brazil's import costs, leading to inflationary pressures. Unlike Turkey, Brazil's reliance on commodity exports causes it to experience US monetary policy effects differently.

In conclusion, the effects of US contractionary monetary policies on countries such as Turkey, Canada and Brazil vary due to differences in their economic structures. While Turkey's import-weighted trade balance is more vulnerable to the appreciation of the US dollar (Akalin and Prater, 2015), commodity-oriented economies such as Canada and Brazil are able to respond to these changes in a more adaptive manner.

4.THOUGHTS ON WORLD TRADE

4.1.Global Trade Dynamics

US dollar appreciation due to changes in the shadow dollar rate can have broader implications for world trade. As the US dollar strengthens, countries with weaker currencies may find it more difficult to compete in the global market, potentially leading to trade imbalances and shifts in trade patterns (Tokmakçıoğlu et al., 2019).

Turkey is among the countries that may be negatively affected by the strengthening of the US dollar (Akalin and Prater, 2015; Yıldırım, Akdağ and Alola, 2022). In particular, its high external debt stock and import-dependent production structure lead to an increase in costs with the strengthening of the dollar. Apart from these economic effects, it can also trigger environmental pollution (Köksal, Işık, & Katircioğlu, 2020). This situation weakens the competitiveness of Turkish producers and may make it difficult to compete with countries with lower production costs such as China and India in export markets. For example, Turkey's textile and automotive sectors, while experiencing cost increases with the appreciation of the dollar, may also face the risk of losing market share as export goods become more expensive in international markets (Yıldırım, Akdağ and Alola, 2022). In contrast, large export economies such as China feel the effects of US dollar appreciation in a different way. By managing the value of the yuan in a controlled manner, China can maintain the international competitiveness of its export goods (Coquid'e, Lages and Shepelyansky, 2022).

For example, China's high-demand products such as electronics and machinery may remain attractive in the global market despite price increases. This creates an advantage that cannot be realized in free market economies like Turkey.

Similarly, for commodity exporters like Brazil, a stronger US dollar could boost export Revenues for commodity exporters like Brazil. Brazil's agricultural products (e.g. soybeans) and minerals may be positively affected as they are priced in dollars. However, this positive impact is usually partially offset by higher import costs and inflationary pressures in the domestic market. Compared to Turkey, Brazil's economic structure based on commodity exports makes it less likely to feel the negative effects of a stronger dollar.

Looking at advanced economies, regional blocs such as the European Union may also be affected by a stronger US dollar. For example, strong export-oriented economies such as Germany may gain an export advantage as the euro depreciates. However, this advantage is partially offset by the fact that energy and raw material imports are priced in dollars. Compared to Turkey's more fragile economic structure (Caliskan and Karimova, 2017), developed countries such as Germany have a trading system that is more resilient to such shocks.

In sum, the strengthening of the US dollar leads to both imbalances in world trade and changes in competitive dynamics. While countries dependent on external debt and imports, such as Turkey, are adversely affected by this process, large production and export economies, such as China and Brazil are able to respond to these changes in a more adaptively. This may lead to shifts in global trade patterns and deepening trade imbalances across countries

4.2.Mutual Economic Interdependence

Many studies emphasize the interconnectedness of economies, showing that changes in US monetary policy and economic activity can have ripple effects on other countries' trade balances and exchange rates (Özaydin, 2019). This interdependence emphasizes the importance of considering domestic and external factors in global trade analysis (Tokmakçıoğlu et al., 2019).

Turkey has a highly sensitive economy in terms of global trade and capital flows. Contractionary monetary policies, such as interest rate hikes by the US Federal Reserve (Fed), cause foreign capital outflows from Turkey, which can lead to a rapid depreciation of the Turkish lira (Özaydin, 2019). For example, during the *"Taper Tantrum"* period in 2013, the Fed's signals that it would taper its quantitative easing program led to sudden capital outflows and currency shocks in emerging markets such as Turkey. This process worsened Turkey's foreign trade balance and increased import costs. In such a situation, Turkey's import dependence on basic goods such as energy is directly affected by exchange rate fluctuations, while the gains of exporting sectors remain limited (Caliskan and Karimova, 2017).

For China, changes in US monetary policy usually have more indirect effects. The bulk of China's foreign exchange reserves are denominated in US dollar, and the yuan is held at a relatively stable level against the US dollar. Therefore, the Fed's policies may have a limited direct impact on China's exchange rate (Coquid'e, Lages and Shepelyansky, 2022). However, a decrease or increase in US demand can directly affect China's export performance. For example, the decline in US demand after the 2008 global financial crisis led to a growth slowdown in the Chinese economy, which had a ripple effect on China's trade relations with other Asian countries.

Commodity exporters such as Russia, Ukraine and Turkey are affected by fluctuations in commodity prices due to US interest rate hikes. A stronger US dollar could lower commodity prices, reducing their export revenues. On the other hand, weaker local currencies may make their export products more competitive in the global market. However, excessive exchange rate volatility can undermine investor confidence and cause long-term instability in these countries' economies (Akalin and Prater, 2015). Compared to Turkey, countries with economies based on strong commodity exports, such as Brazil, may be more resilient to exchange rate shocks.

In terms of advanced economies, European Union countries are indirectly affected by US monetary policies. For instance, in the euro area, fluctuations in the US dollar may lead to cost changes, especially in energy imports. While export-oriented countries such as Germany may gain an export advantage thanks to the weakening euro, rising in energy and raw material prices may increase production costs. Compared to emerging economies such as Turkey, EU countries are more resilient to such shocks as they have stronger reserves and lower external debt ratios.

Economic Interdependence is leading to increasingly complex global trade dynamics. While

countries such as Turkey, Brazil and China are affected differently by changes in US monetary policy, the economic structure of each determines the depth and consequences of these effects. Import-oriented and financially fragile economies like Turkey are more adversely affected by such changes (Özaydin, 2019). Export-oriented economies like China may respond more harmoniously to such fluctuations (Coquid'e, Lages and Shepelyansky, 2022).

5.CONCLUSION

The shadow dollar can significantly affect foreign trade by influencing exchange rates and trade balances. An increase in the shadow interest rate can lead to an appreciation of the US dollar and affect the trade balances of countries such as Turkey differently than with Canada. These changes reflect broader shifts in world trade dynamics, highlighting the interconnected nature of global economies. Turkey, as an economy that relies heavily on imports and energy for most of its foreign trade, is highly exposed to changes in the US dollar. An increase in the shadow interest rate and an appreciation of the US dollar could increase Turkey's import costs and deepen its trade deficit. In particular, Energy imports, raw materials and intermediate goods become more costly as the Turkish lira depreciates. This could adversely affect Turkey's trade balance and pressure on the country's economic growth targets.

However, a developed country like Canada may feel the effects of dollar appreciation in a different way. Canada invoices in dollars for most of its foreign trade with the US, with which it has a strong trade relationship. Therefore, an İncreasing in the value of US dollar may make Canada's imports more expensive, but its exports more competitive. Moreover, Canada's dependence on energy resources may enable it to benefit from a stronger dollar as oil and natural gas prices are priced in US dollars. This could have a positive impact on Canada's trade balance.

The case of Mexico illustrates a different dynamic. Mexico's intensive trade relations with the US and its habit of largely dollar-denominated transactions may have similar effects on Mexico's trade balance. However, since much of Mexico's production structure is based on low- cost labor and commodity exports, the appreciation of the US dollar may make Mexico's competitive products more attractive. This may lead to an increase in Mexico's exports and a favourable impact on the trade balance.

These differences between Turkey, Canada and Mexico show how dynamic and interdependent global trade is. While the negative effects on Turkey's trade balance have become more pronounced with the strengthening of the dollar, in countries such as Canada and Mexico, these effects vary according to their trade strategies and economic structures. This shows how the ever-changing dynamics of world trade can accelerate shifts in economic relations between countries and how interconnected global economies are.

In conclusion, the impact of the shadow dollar varies according to the economic structure and foreign trade strategies of each country. While developing countries such as Turkey are more adversely affected by these changes, advanced economies such as Canada and Mexico may be affected differently by this process by showing more flexibility. The increasing complexity of global trade increases the interdependence of countries and leads to significant shifts in foreign trade balances.

Etik Kurul Onayı Hakkında Bilgi: Etik kurulu onayına ihtiyaç duyulmamıştır.
Information About Ethics Committee Approval: Ethics committee approval was not required.
Araştırma ve Yayın Etiği Beyanı: Bu çalışmanın tüm hazırlanma süreçlerinde etik kurallara uyulduğunu yazar beyan eder. Aksi bir durumun tespiti halinde ASSAM UHAD'nın Dergisinin hiçbir sorumluluğu olmayıp, tüm sorumluluk çalışmanın yazarına aittir.
Research And Publication Ethics Statement: The author declare that the ethical rules are followed in all preparation processes of this study. In the event of a contrary situation, the ASSAM International Refereed Journal has no responsibility and all responsibility belongs to the author of the study.
Çıkar Çatışması Beyanı: Yazar ya da herhangi bir kurum/ kuruluş arasında çıkar çatışması yoktur.
Conflict Of Interest Statement: There is no conflict of interest among the author and/or any institution.
Katkı Oranı Beyanı: Hasan BARDAKÇI çalışmanın tüm bölümlerinde ve aşamalarında katkı sağlamıştır.
Contribution Rate Statement: Hasan BARDAKÇI, have contributed to all parts and stages of the study.

REFERENCES

Akalin, G., & Prater, E. (2015). The Global Crisis of the Late 2000s and Currency Substitution: A Study of Three Eastern European Economies Russia, Turkey and Ukraine. *Journal of Central Banking Theory and Practice*, 4, 22 - 5. https://doi.org/10.1515/jcbtp-2015-0006.

Boadway, R. (1975). Benefit-Cost Shadow Pricing in Open Economies: An Alternative Approach. *Journal of Political Economy*, 83, 419 - 430. https://doi.org/10.1086/260331.

Caliskan, A., & Karimova, A. (2017). Global Liquidity, Current Account Deficit, and Exchange Rate Balance Sheet Effects in Turkey. *Emerging Markets Finance and Trade*, 53, 1619 - 1640. https://doi.org/10.1080/1540496X.2016.1216837

Chao, C., & Yu, E. (1999). Shadow prices and trade restrictions in a monetary economy. *Journal of Macroeconomics*, 21, 755-764. https://doi.org/10.1016/S0164-0704(99)80005-6.

Coquid'e, C., Lages, J., & Shepelyansky, D. (2022). Dollar-Yuan Battle in the World Trade Network. *Entropy*, 25. https://doi.org/10.3390/e25020373.

Dafermos, Y., Gabor, D., & Michell, J. (2022). FX swaps, shadow banks and the global dollar footprint. *Environment and Planning A: Economy and Space*, 55, 949 - 968. https://doi.org/10.1177/0308518X221128302.

Gnangnon, S. (2022). Do Aid for Trade Flows Help Reduce the Shadow Economy in Recipient Countries?. *Economies*. https://doi.org/10.3390/economies10120310.

Köksal, C., Işık, M., & Katircioğlu, S. (2020). The role of shadow economies in ecological footprint quality: empirical evidence from Turkey. *Environmental Science and Pollution Research*, 27, 13457-13466. https://doi.org/10.1007/s11356-020-07956-5.

Ma, S., Schmidt-Eisenlohr, T., & Zhang, S. (2020). The Causal Effect of the Dollar on Trade. *FEN: Other International Corporate Finance (Topic)*. https://doi.org/10.2139/ssrn.3741800.

Marmora, P. (2021). Currency substitution in the shadow economy: International panel evidence using local Bitcoin trade volume. *Economics Letters*, 205, 109926. https://doi.org/10.1016/J.ECONLET.2021.109926.

Özaydin, O. (2019). Turkey Foreign Trade Interaction with Cross Exchange Rates: Beneath the Currency Wars. *Journal of International Trade, Logistics and Law*, 5, 59-69.

Santanu, I., & Wardani, K. (2023). How the American dollar exchange effect on foreign direct investment and trade balance?. *International journal of business, economics & management*. https://doi.org/10.21744/ijbem.v6n1.2129.

Standaert, S. (1985). The foreign exchange constraint, suppression of the trade deficit and the shadow price of foreign exchange in a fix-price economy. *Journal of Development Economics*, 18, 37-50. https://doi.org/10.1016/0304-3878(85)90005-7.

Tokmakçıoğlu, K., Ozcelebi, O., & Ozdemir, A. (2019). The role of asymmetry in the interplay between internal and external factors: Empirical evidence from the US, Brazil, Canada and Mexico. *Zbornik radova Ekonomskog fakulteta u Rijeci: časopis za ekonomsku teoriju i praksu/Proceedings of Rijeka Faculty of Economics: Journal of Economics and Business*. https://doi.org/10.18045/ZBEFRI.2019.1.55.

Yıldırım, H., Akdağ, S., & Alola, A. (2022). Is there a price bubble in the exchange rates of the developing countries? The case of BRICS and Turkey. *Journal of Economics, Finance and Administrative Science*. https://doi.org/10.1108/jefas-04-2021-0025.