10.2478/nispa-2024-0014

Western Sanctions Evasion through Third Countries: The Case of Sanctioned Cars Re-export to Russia

Vakhtang Partsvaniya[1], Erekle Pirveli[2]

Abstract:

This paper investigates the role of third countries in circumventing Western sanctions on Russia amidst the geopolitical tensions following its 2022 invasion of Ukraine. We use car export/import data from January 2018 to June 2024 and apply the gravity model of international trade, adjusted with the difference-in-differences estimation technique. Our empirical results suggest that the introduction of secondary sanctions targeting third countries led to a significant decrease in the volume of cars directly re-exported from the Western-oriented third country of Georgia to Russia, but concurrently caused a significant increase in the volume of cars re-exported from Georgia to third countries such as Armenia, Kazakhstan, and Kyrgyzstan, which share a common trade bloc with Russia. These findings raise questions about the effectiveness of Western sanctions, as the sanctioned goods ultimately reach the sanctioned country through indirect and extended channels involving its trade bloc partners. This study provides valuable insights into circumvention strategies and suppression mechanisms, with implications for third countries and global sanctions enforcement. The existing trade patterns jeopardize the strategic alignment of countries like Georgia with the EU and expose them to the risks of secondary sanctions.

Keywords:

Gravity model, difference-in-differences, international trade, Russia, sanctions

1 Caucasus University, Caucasus School of Business, Tbilisi, Georgia.
2 Caucasus University, Caucasus School of Business, Tbilisi, Georgia.

© 2024 Vakhtang Partsvaniya, Erekle Pirveli. This is an open access article licensed under the Creative Commons Attribution-onCommercial-NoDerivatives 4.0 License (https://creativecommons.org/licenses/by-nc-nd/4.0/).

1. Introduction

Geopolitical conflicts frequently disrupt international trade, particularly when economic sanctions are imposed (Berger et al., 2013; Glick & Taylor, 2010). The year 2022 marked a significant turning point in global affairs with Russia's full-scale invasion of Ukraine, which prompted a robust response from Western nations through targeted economic sanctions (Van Bergeijk, 2022). These sanctions aim to alter behaviors, enforce international norms, and restrict resources fueling the conflict, representing a complex strategy for exerting political and economic pressure (Hufbauer et al., 2008; Morgan et al., 2023).

The effectiveness of sanctions as a tool for achieving desired policy outcomes, however, remains a subject of ongoing debate within scholarly circles (Kamei et al., 2023; McLean & Whang, 2010; Caruso, 2003). Despite this, states have increasingly relied on sanctions as an instrument of foreign policy, evidenced by a significant rise in their use since the end of World War II (Morgan et al., 2023). According to the Global Sanctions Database, 405 sanctions were active by the end of 2022, with around 300 imposed in the past decade alone (Felbermayr et al., 2020).

Sanctions are designed to impose costs and induce behavioral changes, yet their effectiveness often depends on various factors, including the targeted country's resilience, the availability of alternative economic channels, and the cooperation of third-party actors or intermediaries (Erport & Fadlon, 2023; Liadze et al., 2023). In this complex landscape, sanctions evasion and circumvention have become critical areas of study. Research in this domain uncovers adaptive strategies employed by targeted countries and organizations to mitigate the impact of sanctions and provides policy recommendations for third countries to prevent and suppress circumvention schemes. A prominent evasion method involves re-exportation channels facilitated by third countries (Lukaszuk, 2021; Barry & Kleinberg, 2015).

This study focuses on car re-exports from Georgia to Russia, as well as to Armenia, Kazakhstan, and Kyrgyzstan—three countries that are part of a customs-free trade bloc with Russia, the Eurasian Economic Union (EAEU). Sanctions evasion is particularly prevalent in industries with complex supply chains, such as the automotive sector, where goods are imported into third countries for subsequent resale to sanctioned destinations, thereby bypassing direct prohibitions. The analysis examines car trade patterns using monthly import/export data from January 2018 to June 2024 at the 4-digit Harmonized System (HS) level (HS 8703: Motor cars). Georgia emerges as a noteworthy case study in sanctions circumvention following the imposition of Western sanctions on Russia for several reasons. First, Georgia is historically situated at the crossroads of geopolitical tensions and influenced by major global powers like the USA, the EU, Russia, and China (German, 2022; Sabanadze, 2002), Simultaneously, it navigates a strategic policy direction toward European integration and becoming a member of the European Union (German, 2015; Kakachia & Minesashvili, 2015; Webber, 2023). Second, Georgia was recently granted EU candidate status, and its

further integration progress depends not only on addressing a wide range of political and legal issues but also on aligning its foreign and security policies with those of the EU. Third, Georgia's economic dependence on Russia has increased, evidenced by rising imports of dual-use goods and re-exports to the EAEU (Transparency International, 2023; RFE/RL, 2023). Particularly noteworthy is the surge in car re-exports from Georgia, indicating the existence of sanctioned trade flows between Georgia and Russia through hidden channels. These tendencies heighten the risk of secondary sanctions being imposed on Georgia for contributing to sanctions circumvention, as sanctions-imposing authorities are focusing on improving compliance mechanisms and may extend sanctions directly against third countries or their official bodies (Kamei et al., 2023; Barigazzi et al., 2023).

We apply the gravity model of international trade, supplemented by the difference-in- differences estimation technique, to observe changes in car re-export volumes following the imposition of secondary sanctions on third countries. Our findings suggest that these sanctions lead to a shift in trade volumes, from between Georgia and Russia to between Georgia and other third countries. This shift poses strategic risks to Georgia's relationships with Western countries and may undermine its foreign policy alignment with the EU, potentially affecting its integration processes.

This paper contributes to broader discussions on the efficacy of sanctions as a geopolitical tool and the role of third countries in global trade. Through a robust theoretical framework and empirical analysis, it provides a comprehensive understanding of the interdependence between economic sanctions, trade dynamics, and geopolitical imperatives, with implications for both researchers and policymakers. The study also offers policy recommendations regarding the effectiveness of sanctions and emphasizes the limited strategic value of sanctions circumvention for Western-oriented third countries. Ensuring compliance with the Western sanctions regime would strengthen these countries' alignment with the Western community and support their strategic aspirations to become full members of the European Union.

The paper is structured as follows: Section 2 provides a literature overview to develop the theoretical model for sanctions evasion through third countries. Section 3 outlines the economic sanctions imposed on Russia and investigates sanctions evasion patterns within Georgia's car re- export context, describing the sanctions circumvention channels and formulating hypotheses. Section 4 introduces data sources and methodology, while Section 5 presents a descriptive and multivariate analysis of the effects of sanctioned car re-exports on Georgia's trade based on the chosen research model. Section 6 discusses the implications, and the final section concludes the study.

2. Literature overview and theoretical framework

Sanctions, broadly defined as "restrictive policy measures that one or more countries take to limit their relations with a target country in order to persuade that country to

change its policies or to address potential violations of international norms and conventions" (Morgan et al., 2023, p. 3), serve multifaceted purposes and manifest in various forms. While primarily aimed at promoting democracy, human rights, counterterrorism, and nuclear non-proliferation, they are also employed to destabilize regimes, resolve military conflicts, and address international law violations. Sanctions typically involve curtailing trade with the targeted state, alongside measures such as travel restrictions, asset freezes, and financial institution access denial for specified individuals, entities, or groups. Despite these measures, sanctioned entities and firms possess several strategies to circumvent sanctions, including redirecting trade flows, seeking alternative suppliers, and establishing robust channels for sanctions evasion through third countries (Van Bergeijk, 1995; Haidar, 2017). Consequently, the role of third countries as intermediaries in trade flows affected by sanctions has gained significant prominence.

The concept of sanctions evasion has attracted considerable attention, particularly for its *extraterritorial effects* on third countries alongside their *primary effects* on interacting nations.

The shifts in trade patterns resulting from sanctions not only alter trade diversion but also have broader implications on market dynamics and trade outcomes (Hufbauer & Oegg, 2003; Kohl & Reesink, 2019). The strategic ramifications of sanctions evasion extend beyond economic considerations, encompassing political alignment, foreign policy objectives, and long-term relationships with sanctioning entities and international bodies.

A substantial body of literature has explored the efficacy of economic sanctions, predominantly focusing on their impact on macroeconomic indicators within both targeted and sanctioning countries (Hufbauer & Oegg, 2003; Kohl & Reesink, 2019; Pala, 2021). These studies aim to discern whether sanctions achieve their intended objectives, such as compelling sanctioned entities to comply with the demands of the sanctioning country (Hufbauer et al., 1990; Hufbauer & Oegg, 2003; Jones, 2015). However, the literature presents a mixed picture regarding the overall effectiveness of sanctions. While some studies suggest negative effects on the target country and its firms (Ahn & Ludema, 2020; Kirilakha et al., 2021; Draca et al., 2023), others argue that sanctions do not consistently alter a country's policies and may have limited economic impacts on GDP and trade patterns (Shin et al., 2015).

In contrast, the efficacy of economic sanctions in the context of circumvention and evasion has received comparatively less scholarly attention, despite the widespread recognition in the literature that sanctions' effects extend beyond the target states. Previous research has highlighted that when trading partners provide economic assistance or facilitate alternative trade routes for sanctioned products, the intended impact of sanctions diminishes significantly (Bonetti, 1998; Early, 2009; Morgan et al., 2023). A notable gap in the literature pertains to the mechanisms used by nations to bypass sanctions (Ahn & Ludema, 2020; Gaur et al., 2023; Haidar, 2017). Recent studies

on sanction evasion have predominantly focused on the enforceability of individual and firm-related sanctions, as well as restrictions related to financial flows (Besedeš et al., 2017; Cipriani et al., 2023; Kohl & Reesink, 2019). However, comprehensive studies on the prevalence of sanction evasion in the context of neighboring regions and countries are lacking.

Moreover, secondary sanctions have emerged as a significant area of interest in sanction- related literature. They target entities in third countries for engaging in trade or business with sanctioned entities and have complex implications (Meyer, 2009; Ruys & Ryngaert, 2020). Studies have examined the effectiveness of secondary sanctions in deterring third-country actors from facilitating sanctions evasion (Han, 2018; Ghironi et al., 2024). However, the unintended consequences of secondary sanctions on third countries' economies, diplomatic relations, and strategic alignments have garnered less attention and require further investigation. Furthermore, while much research has concentrated on the impact of sanctions on sanctioning and targeted countries, there has been notably less examination of third countries (Becker et al., 1990; Biersteker et al., 2016; Cannes, 2000; Torbat, 2005). Yet, the indirect negative economic consequences of sanctions are particularly felt by third countries that are theoretically expected to align politically with the sanctioning countries. However, if these third countries facilitate sanctions circumvention, there may be positive economic effects due to redirected trade flows.

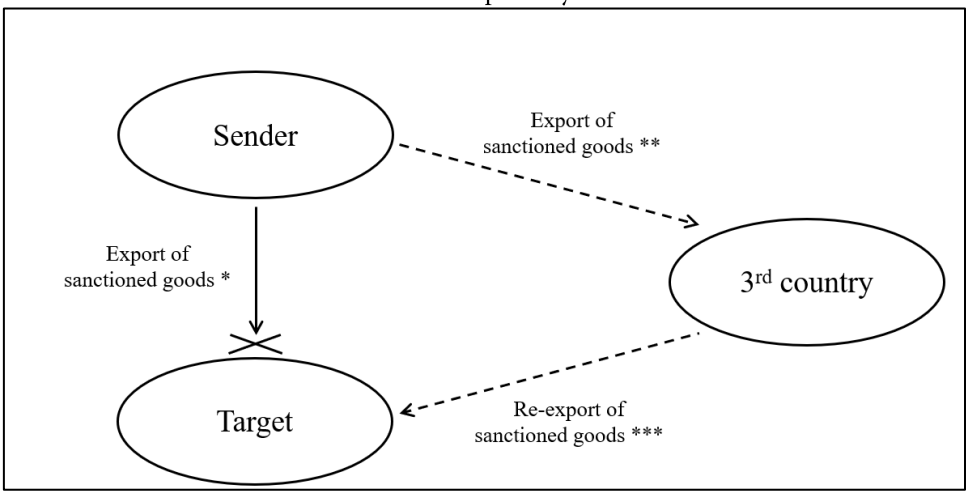
The incentives to evade trade barriers are especially pronounced for economic sanctions, as they aim to economically impact the target economy and key decision-makers by minimizing trade flows (Eaton & Engers, 1992; Kaempfer & Lowenberg, 1988), unlike import tariffs, which primarily seek to extract rent and support the implementing jurisdiction's industry. Consequently, a significant portion of the sanction literature addresses the effectiveness of sanctions in terms of their enforceability (Caruso, 2003; McLean & Whang, 2010; Van Bergeijk & Biersteker, 2015). Factors such as lack of support from the target's primary trading partners (Dizaji & Van Bergeijk, 2013; Noland, 2009) or the scope of the sanctions (Caruso, 2003; Hufbauer & Oegg, 2003) play pivotal roles in determining whether the imposed barriers are successfully evaded.

To analyze the main trade flows of sanctioned goods between key actors and the exterritorial effects on third countries, Syropoulos & Yotov (2023) developed a theoretical model presented in Figure 1 that outlines the possible interactions: the "Sender" (a single country, organization, or group of countries imposing sanctions); the "Target" (the sanctioned country or countries); and the "Third country" (representing the rest of the world). Third countries, often comprising a group of nations either aligned with or against the sender or target, play a key role in determining sanctions' efficacy due to their economic size and relationships with the sender and target. Following this theoretical model, we need to distinguish between primary effects, which pertain to changes in bilateral trade between sanction-imposing and target countries, and extraterritorial effects, which encompass alterations in bilateral trade among

sanction regime participants (senders and targets) and non-participant countries (third countries) (Syropoulos & Yotov, 2023).

Figure 1:

Redirection of trade flows due to primary effects of economic sanctions



Note: This figure depicts the main actors and economic sanctions effects, where: (*) shows minimization / termination of direct export of sanctioned goods from Sender to Target due to Primary sanction effect (captured by the solid arrow); (**) indicates the increase of export of sanctioned goods from Sender to Third country due to Exterritorial sanction effect (captured by the dash arrow); (***) Demonstrates the increase of re-export of sanctioned goods from Third country to Target due to Exterritorial sanction effect (captured by the dash arrow).

Source: Syropoulos & Yotov (2023), with authors' adjustments

This study aims to contribute to the literature on the strategic and economic implications of sanctions evasion, particularly focusing on the effects of circumvention schemes on third countries.

3. Setting the context and hypotheses

3.1 Sanctions to Russia

The use of sanctions as a tool to influence public policy changes in Russia can be traced back to the adoption of the Magnitsky Sanctions by the U.S. Government, stemming from the Sergei Magnitsky Rule of Law Accountability Act of 2012. These targeted sanctions were a response to specific actions by Russian government officials involving a U.S. investor (Van der Have, 2020). Commencing in April 2013, the Magnitsky sanctions initially targeted 18 individuals for violations of civil and human rights in Russia.

The landscape of targeted economic sanctions expanded significantly after Russia's annexation of Crimea and the outbreak of war in eastern Ukraine in 2014. Over the period from 2014 to 2021, the international community, led by the USA, NATO, and the EU, implemented multiple rounds of sanctions, targeting individuals, entities, and sectors in Russia (Bayramov et al., 2020). As tensions between Western nations and Russia escalated and global concerns over Russian activities grew, the pressure from sanctions intensified. Subsequent rounds of sanctions were imposed, not directly related to the Crimea annexation, such as those in response to Russia's interference in the 2016 U.S. elections or its activities in cyberspace.

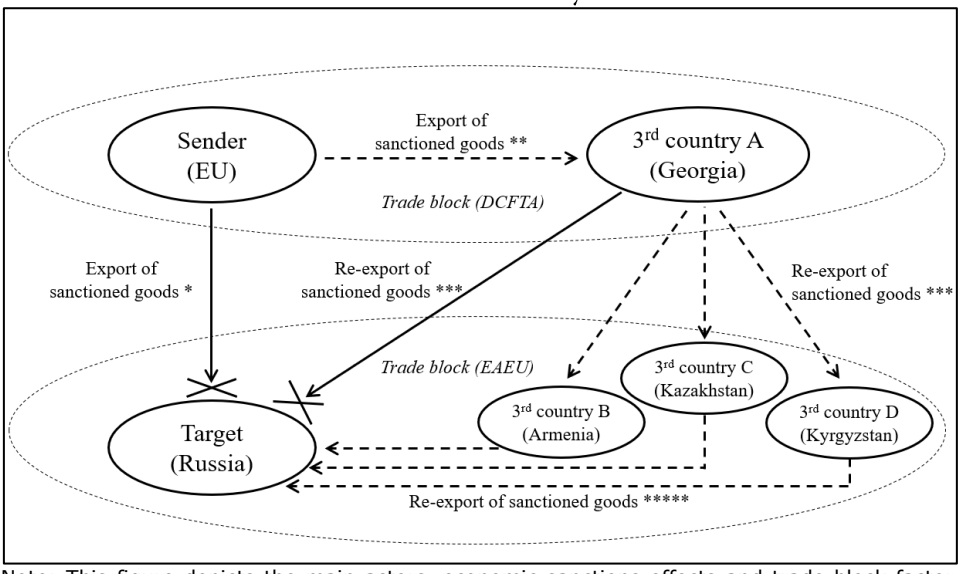
The most recent and stringent sanctions were imposed following Russia's full-scale invasion of Ukraine in February 2022. Following the invasion, numerous countries responded by implementing a diverse array of economic sanctions against Russia, progressively intensifying their enforcement over time. These sanctions expanded significantly, targeting a broader range of individuals, entities, and sectors, causing a substantial impact on the Russian economy (Van Bergeijk, 2022). The impact was particularly evident in disrupted key export flows to Russia, leading to notable decrease in imports across various sectors (Mahlstein et al., 2022).

In response to the adverse effects of sanctions on its economy, the Russian government adopted strategic changes and prioritized policies across industries. This included creating various import channels through neighboring countries to facilitate the re-export of sanctioned goods to Russia (Erport & Fadlon, 2023).

To apply the theoretical model (Fig. 1) to the trade flows reality after the economic sanctions imposed on Russia in the aftermath of its invasion of Ukraine, we have expanded it to incorporate strategies adopted by neighboring third countries such as Georgia, Armenia, Kazakhstan, and Kirgizstan to mitigate the risks of secondary sanctions (Fig. 2). Secondary sanctions refer to changes in bilateral trade among third countries triggered by the threat of sanctions for facilitating sanctions evasion (Meyer, 2009). These strategies often leverage existing trade agreements and regional alliances (Bove et al., 2021), as exemplified by Russia's leadership in the EAEU and various free trade agreements with neighboring countries. Noteworthy examples include Georgia's dual role as a significant trade partner with Russia and a participant in the EU's Deep and Comprehensive Free Trade Area (DCFTA) (Karapetyan, 2023; Souleimanov & Fedorov 2023).

Figure 2:

Redirection of trade flows due to secondary effects of economic sanctions



Note: This figure depicts the main actors, economic sanctions effects and trade block factor, where: (*) shows minimization / termination of direct export of sanctioned goods from Sender to Target due to Primary sanction effect (captured by the solid arrow); (**) indicates the increase of export of sanctioned goods from Sender to Third country from the same trade block due to Exterritorial sanction effect (captured by the dash arrow); (***) demonstrates minimization / termination of re-export of sanctioned goods from Third country to Target due to Secondary sanction effect (captured by the solid arrow); (****) demonstrates the increase of re-export of sanctioned goods from one Third country to another which is not from the same trade block, due to Exterritorial and Secondary sanctions effects (captured by the dash arrows); (*****) shows the increase of re-export of sanctioned goods from third countries to Target having a common trade block, due to Exterritorial and Secondary sanctions effects (captured by the dash arrows).

Source: Authors' own, 2024

The dynamics of global car trade shifted significantly due to the war in Ukraine, transforming some countries without car manufacturing facilities into major re-exporters, i.e., into countries that import goods with the intention of reselling them subsequently to other countries. In peaceful times, re-exports sustain international trade, but during military conflicts, they become a means of circumventing sanctions imposed on the aggressor nations (Lukaszuk, 2021).

Sanctioning countries prohibit third countries from re-exporting sanctioned goods, yet compliance is challenging. A complex network involving multiple intermediaries, resellers, and fictitious firms operates in supplying prohibited goods, evading detection by third-country authorities tasked with enforcing sanctions. These authorities often lack the resources to track violators effectively. As a consequence, prohibited dual-use goods continue to flow from the European Union to Russia (RFE/RL, 2023). Therefore, Western countries are actively imposing restrictions on

third-country organizations involved in circumventing sanctions.

3.2 Sanctions evasion through Georgia and hypotheses development

Discussions on tightening secondary sanctions often mention Georgia. While aspiring for EU membership, Georgia doesn't impose its own sanctions on Russia and continues trade, despite the absence of diplomatic relations. This ambivalence makes Georgia susceptible to being used by Russia to bypass sanctions and maintain a supply of sanctioned goods. The surge in cars re- exported from Georgia post-Ukraine war escalation raises concerns about Georgian involvement in sanctions circumvention.

After the outbreak of war, car manufacturers from the so-called "unfriendly" countries ceased activities in Russia: they sold assets, stopped importing their cars and left the market (Sonnenfeld et al., 2022). Separately, the G7 countries and the European Union imposed a ban on the supply of luxury goods, including expensive cars, to Russia. Later on, a ban was imposed on the export of all new and used passenger cars (with engine capacity of more than 1,900 cc), as well as electric and hybrid cars, regardless of their value.

Despite these restrictions, Western cars still reached Russia via legalized parallel imports, with the Lars border checkpoint being a crucial entry point. As a result, KIA, Hyundai and Toyota were included among the Top 10 brands in terms of new passenger car sales in Russia in 2023 (Avtostat, 2024), while sales of sanctioned luxury cars even increased year-on-year (Vedomosti, 2023).

Without imposing its own sanctions against Russia, Georgia nevertheless declares its full compliance with the US and EU sanctions rules. Therefore, shortly after the adoption of the 11th package of EU sanctions in the summer of 2023 and the subsequent US restrictive measures, aimed primarily at countering the circumvention of sanctions (Council of the European Union, 2024), Georgia banned re-exports of all categories of sanctioned vehicles to Russia (Gabritchidze, 2023). Georgian customs authorities tightened control and inspection processes of goods exported to Russia, preventing sanctioned good's delivery, including those in transit from Armenia. The EU, US and UK special sanctions envoys conduct regular monitoring in Georgia to ensure compliance with the sanction's regime. The European Commission's report, published on 8 November 2023, also reaffirms Georgia's commitment to efforts aimed at preventing its territory from being used to circumvent sanctions (European Commission, 2023).

Ever since Georgia was granted the EU candidate status in December 2023, one of the key political priorities for its authorities has been to bring the country's legislation in line with EU rules and standards as soon as possible, leaving ever fewer reasons to suspect Georgia in facilitating the sanctions circumvention. This happened even though passenger cars were Georgia's third largest export commodity to Russia in the first half of 2023 (Transparency International, 2023). This brought some tangible revenues to the

state budget—3,786 cars with an average customs value of USD 14,000 were transported to Russia for a total of USD 53 million, which was 274% higher compared to the same period of preceding year (Gabritchidze, 2023).

The use of "grey" re-export channels to Russia from the EAEU countries has been confirmed in the materials prepared by international organizations (Chupilkin et al., 2023) or in journalistic investigations concerning Armenia, Kazakhstan and Kyrgyzstan. Moreover, these channels are being actively exploited by professional private sellers, causing tangible economic damage to Russian car manufacturers.

The grey re-export channels are also used to deliver sanctioned cars to Russia directly through Georgia, as recent investigations by Georgian journalists have confirmed (Asatiani, 2024). The cars are transported to Russia using a rather sophisticated scheme involving Russian businessmen-bloggers who have emigrated to Georgia: a car is delivered to the Georgian-Russian border and placed in a car park, it then gets registered in the carrier's name and assigned a temporary registration number. The carrier insures the car and takes it to Russia by himself/herself, without customs clearance. On the Russian side, the carrier meets the recipient and they sign a sales contract, and afterwards the carrier simply returns to Georgia. This route can be covered several times within a single day.

It is important to note that cars which are transported in this way are not counted towards Georgia's export statistics. Thus, although the official re-export volumes to Russia were brought to zero after the ban was imposed, the number of cars shipped via this circumvention scheme might be as high as several hundred per month, according to various estimates (Asatiani, 2024).

This practice clearly encourages audacious entrepreneurs to get involved in bypassing sanctions, but it has also led to tougher penalties against violators imposed by the sanctions authorities of Western countries (Aušra, 2023).

Despite the official suspension of re-exports of sanctioned vehicle categories, the Georgian authorities have so far shown no intention to identify and suppress grey channels used for direct car shipments to Russia. Regarding the re-exports of cars to the EAEU countries, Georgia views them as a way to develop international trade without violating the sanctions regime and will likely not take any restrictive measures until Armenia, Kazakhstan and Kyrgyzstan impose restrictions on re-exports to Russia from their territories, or until Western countries further tighten their monitoring of third countries' compliance with sanctions.

Given this context, we propose the following testable hypotheses:

H1: *The imposition of secondary sanctions leads to a significant* ***decrease*** *in the volume of cars re-exported directly from Georgia to Russia.*

H2: *The imposition of secondary sanctions leads to a significant* ***increase*** *in the volume of cars re-exported from Georgia to third countries.*

4. Research design

4.1 Gravity model of trade

This study employs a quantitative method to investigate the dynamics of car re-exports from Georgia concerning the circumvention of Western sanctions. To test our hypotheses, we employ the Gravity model of commerce which is a fundamental framework used to understand the flow of products between countries in the complex network of global trade. It is based on the economic size and distance between trading partners (Van Bergeijk & Brakman, 2010). Economic mass generally corresponds to the GDP of countries engaged in trade, indicating that more significant economies possess a better ability to engage in commerce. Distance comprises not just geographical separation but also linguistic, cultural, and economic differences that may hinder trade. To explore the influence of sanctions on trade flows, the Gravity model can be specified as follows:

$$Trade_{ij} = b_0 + b_1 GDP_j^{\alpha} + b_2 GDP_j^{\beta} + b_3 Distance_{ij}^{\gamma} + b_4 Sanctions_{ij}^{\delta} + b_5 Geopolitical_{ij}^{\epsilon} + \epsilon_{ij}$$

where:

- $Trade_{ij}$ is the trade volume between country *i* and *j*;
- GDP_i and GDP_j are the GDPs of the exporting and importing countries, respectively;
- $Distance_{ij}$ is the geographical distance between *i* and *j*;
- $Sanctions_{ij}$ is a variable indicating the presence and intensity of sanctions between *i* and *j*;
- $Geopolitical_{ij}$ captures geopolitical alignments or tensions between *i* and *j*;
- ϵ_{ij} is the error term.

The model, known for its simplicity and substantial empirical evidence, has consistently provided valuable insights into the factors that influence bilateral trade flows (Deardorff, 1998). However, it primarily references cross-sectional studies. In our context, as we observe shifts in trade volumes from Georgia to other countries like Armenia, Kazakhstan and the Kyrgyzstan, we cannot rely on the distance variable. This investigation adjusts the existing model by incorporating the intricacies brought about by economic sanctions, geopolitical relationships, and the strategic actions of intermediary regions. Specifically, it explores how Georgia plays a role in redirecting car exports to Russia, bypassing the barriers imposed by Western sanctions). This adaptation recognizes the increased economic gap that sanctions create between Russia and its usual trading partners. However, it suggests that the demand for automobiles in Russia and the intermediary role of neighboring countries like Georgia continue to maintain, and possibly even strengthen, the flow of goods in defiance of the sanctions. To amend the model appropriately, we have included variables such as monthly

inflation rates, and currency exchange growth rates (Heid et al., 2021; Martinez-Zarzoso, 2003; Van Bergeijk & Brakman, 2010).

4.2 Estimation technique

Out estimation technique is based on quantitative Difference-in-Differences (DID) analysis (Jiménez & Perdiguero, 2019; Tarka, 2018), which serves as a robust quantitative tool to evaluate the impact of Western sanctions on car re-export volumes and broader economic indicators in Georgia. This methodological approach isolates the causal effects of sanctions and subsequent policy changes, distinguishing them from other external factors. By defining a treatment group exposed to sanctions and a control group unaffected by these policies, DID analysis provides a rigorous framework for estimating differential effects over time. The DID approach compares the change in trade volumes over time between treated and control groups before and after the implementation of sanctions. To test our first hypothesis, we specify the Gravity model as follows:

$$Export_t / Import_t = \beta_0 + \beta_1(Export_t / Total\ Export_t) + \beta_2(Treatment_t) + \beta_3(Export_t / Total\ Export_t \times Treatment_t) + \beta_4 Controls_t + \varepsilon_t$$

Where:

- $Export_t / Import_t$ represents the ratio of the share of monthly car exports from Georgia relative to the total monthly car imports into Georgia, measured in units;
- $Export_t / Total\ Export_t$ represents the ratio of monthly car exports from Georgia to Russia relative to Georgia's total monthly car exports, measured in units;
- $Treatment_t$ term represents a binary variable, with 1 indicating the period after the introduction of secondary sanctions, and 0 otherwise;
- $Export_t / Total\ Export_t \times Treatment_t$ is an interaction term and it reflects the differential effect of sanctions on the treatment group compared to the control group, allowing for an assessment of sanctions' policy impacts ($\beta 3$);
- *Controls* include the following monthly macroeconomic parameters for Russia: GDP at current prices, inflation rate, and currency exchange growth rate. GDP is reported in current prices. The inflation rate is calculated on a month-on-month basis. Currency exchange growth rate is calculated relative to the USD.

To test our second hypothesis, we apply the same model, but instead of examining the decline in the share of Georgian car exports to the Russian market, we focus on the share of cars exported from Georgia collectively to Armenia, Kazakhstan, and

Kyrgyzstan relative to the total number of cars exported from Georgia. We conduct tests for both models based on the number of car units as well as the value of cars exported in USD.

A positive and significant β3 coefficient would indicate an increase in trade volumes of cars between Georgia and Russia, suggesting that sanctions have led to an intensification of trade through alternative channels or circumvention strategies. Conversely, a negative β3 would suggest a reduction in trade volumes, indicating the effectiveness of sanctions in curbing trade flows of sanctioned goods.

Our analysis relies on trade statistics and key economic indicator data reported by the national statistical offices of Armenia, Georgia, Kazakhstan, Kyrgyzstan, and Russia. We focus on car export flows from Georgia to Russia and members of the EAEU (Armenia, Kazakhstan and the Kyrgyzstan). Export values in units and USD are available from the Geostat – National Statistics Office of Georgia database, categorized at the 4-digit Harmonized System (HS) level, on a monthly basis from January 2018 to June 2024 (78 months).

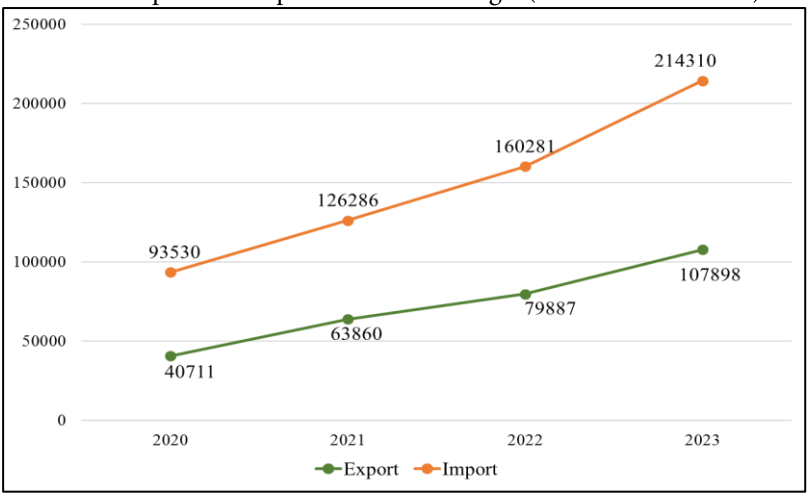
5. Results

5.1 Descriptive results

The re-export dynamics of cars in Georgia reveal significant shifts in response to the imposition of sanctions and subsequent enforcement measures. Figure 3 illustrates the annual data on car imports and exports in Georgia, highlighting that consistently, every second car imported into Georgia is re-exported to third countries, with some portion potentially destined for Russia.

Figure 3:

Import and export of cars in Georgia (annual data in units)

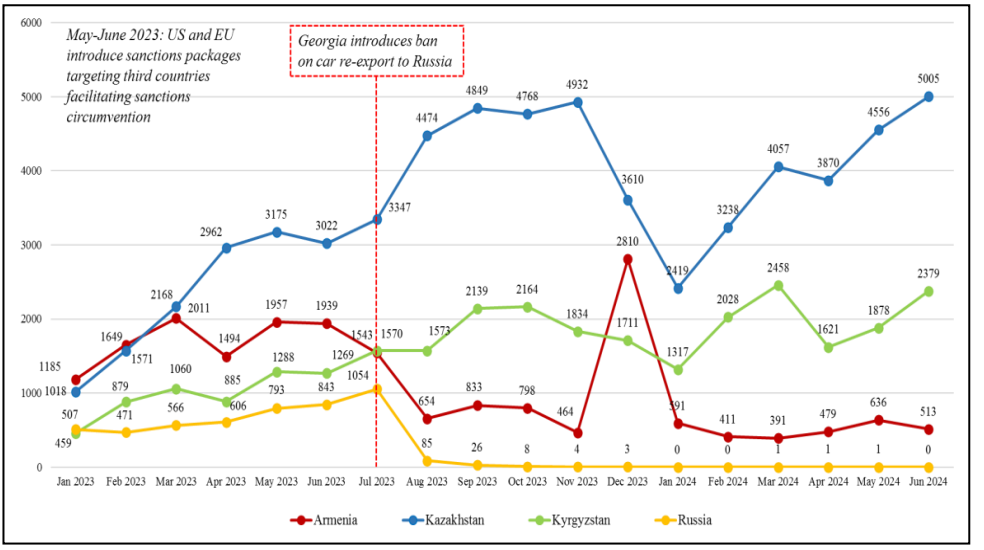


Source: Geostat 2023 – National Statistics Office of Georgia 2024

Following the introduction of sanctions and the introduction of restrictions countering the circumvention of sanctions by third countries, the pattern of car re-exports from Georgia underwent notable changes. Figure 4 shows the monthly data on car re-exports from Georgia to EAEU countries for 2023 and the first half of 2024. The immediate effect of the restrictions is evident: re-exports of cars from Georgia directly to Russia decreased dramatically. In August 2023, only 85 cars were re-exported, a steep decline from 1,020 in July 2023. In the following six months, the number of re-exported cars dropped to zero (Geostat, 2024). However, a new trend emerged: Georgian car re-exports were redirected towards EAEU countries, potentially facilitating the indirect flow of sanctioned cars into Russia.

Figure 4:

Car export from Georgia to EAEU countries (monthly data in units)

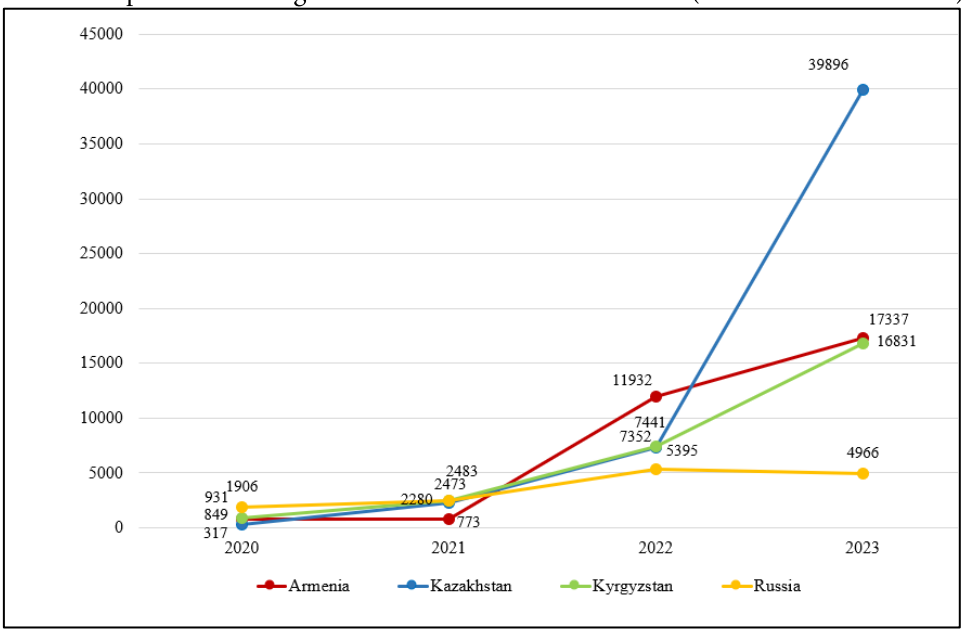


Source: Geostat 2023 – National Statistics Office of Georgia 2024

The volume of re-exports from Georgia to Armenia, Kazakhstan, and Kyrgyzstan surged by 47% in the second half of 2023 compared to the first half, reaching 44,073 cars. Comparing the annual 2023 data with 2021 reveals a staggering growth rate of 1,240%. The first half of 2024 also showed significant numbers, with 37,847 cars redirected to these countries – a 26% increase compared to the first half of 2023. This data indicates that, while Georgia has terminated its direct car export to Russia, it continues to play a key role in supplying the Russian market through third countries.

Figure 5:

Car export from Georgia to EAEU countries in 2020-2023 (annual data in car units)



Source: Geostat 2023 – National Statistics Office of Georgia 2024

Table 1 presents the descriptive statistics for key macroeconomic indicators across five countries: Armenia, Georgia, Kazakhstan, Kyrgyzstan, and Russia. Due to our focus on Georgia as a case study for sanctions circumvention, the Export/Import ratio for Georgia is defined as the share of monthly car exports from Georgia relative to the total monthly car imports into Georgia. For the other countries, the Export/Total Export ratio is used, representing the share of monthly car exports from Georgia to each respective country relative to Georgia's total monthly car exports. The mean Export/Import Ratio in units for Georgia stands at 52.7%, indicating that more than half of the cars imported into Georgia are re-exported. The Export/Import Ratio in USD is slightly higher on average at 56.6%. Georgia's monthly GDP varies significantly, with a mean of $1,814 million. The average monthly inflation rate is 5.7%, and the USD/GEL monthly growth rate shows minimal average change (0.1%).

Armenia, Kazakhstan, and Kyrgyzstan exhibit relatively close trends in their macroeconomic indicators. The Export/Total Export ratio in units for these three countries reveals relatively similar car trade dynamics and large share of cars re-exported from Georgia. Armenia has the highest mean ratio at 22.2%, followed by Kazakhstan at 11.7%, and Kyrgyzstan at 8.0%. This trend is mirrored when expressed in USD, where Armenia again leads with 13.7%, followed by Kazakhstan at 9.6%, and Kyrgyzstan at 10.1%. Kazakhstan stands out with a significantly higher average monthly GDP of $16,982 million, far surpassing Armenia's $1,380 million and Kyrgyzstan's $835

million. This substantial difference highlights Kazakhstan's larger economy. All three countries maintain relatively similar monthly inflation rates, all below 10%, indicating relatively stable price levels. The monthly growth rates of the respective currencies (USD/AMD, USD/KZT, USD/KGS) show a common pattern of minimal growth. This reflects a generally stable exchange rate environment across these countries.

Russia has the lowest mean Export/Total Export Ratio in units, with an average of 3.9%. The Export/Total Export Ratio in USD is slightly lower at 3.2%. Russia's monthly GDP is significantly higher than that of the other countries, with a mean of $152,702 million. The average monthly inflation rate is 6.3%, and the USD/RUB monthly growth rate averages 0.7%.

Table 1:

Descriptive statistics of macroeconomic indicators by countries

Country	Variable	Mean	SD	Min	Median	Max
Georgia						
	Export / Import ratio units (%)	52.7%	20.1%	10.7%	48.5%	140.7%
	Export / Import ratio USD (%)	56.6%	15.5%	24.2%	55.5%	98.2%
	GDP (million USD)	1814	518	1171	1564	2762
	Inflation rate (%)	5.7%	4.2%	0.0%	4.7%	13.9%
	USD / GEL growth rate (%)	0.1%	2.4%	-6.5%	0.0%	7.8%
Armenia						
	Export / Total Export ratio units (%)	22.2%	22.6%	0.5%	10.7%	64.7%
	Export / Total Export ratio USD (%)	13.7%	12.2%	0.4%	8.7%	40.3%
	GDP (million USD)	1380	461	773	1277	2557
	Inflation rate (%)	3.5%	3.4%	-0.9%	2.2%	10.3%
	USD / AMD growth rate (%)	-0.3%	1.9%	-9.2%	-0.1%	4.9%
Kazakhstan						
	Export / Total Export ratio units (%)	11.7%	17.3%	0.0%	1.8%	54.2%
	Export / Total Export ratio USD (%)	9.6%	11.9%	0.0%	2.8%	38.9%
	GDP (million USD)	16982	5248	10740	15485	32333
	Inflation rate (%)	9.3%	4.4%	4.8%	7.4%	21.3%
	USD / KZT growth rate (%)	0.4%	2.9%	-8.8%	0.1%	14.4%
Kyrgyzstan						
	Export / Total Export ratio units (%)	8.0%	7.2%	0.0%	6.2%	29.7%
	Export / Total Export ratio USD (%)	10.1%	14.0%	0.0%	3.9%	55.0%
	GDP (million USD)	835	237	497	812	1391
	Inflation rate (%)	7.4%	5.2%	-0.7%	7.3%	16.2%
	USD / KGS growth rate (%)	0.3%	2.5%	-6.5%	0.1%	17.8%
Russia						
	Export / Total Export ratio units (%)	3.9%	3.2%	0.0%	3.3%	14.1%
	Export / Total Export ratio USD (%)	3.2%	2.8%	0.0%	2.4%	13.5%
	GDP (million USD)	152702	25458	109848	150064	206821
	Inflation rate (%)	6.3%	4.0%	2.2%	5.2%	17.8%
	USD / RUB growth rate (%)	0.7%	6.3%	-24.7%	0.4%	34.1%

Note: Export / Import Ratio refers to the share of monthly car exports from Georgia relative to the total monthly car imports into Georgia, measured in units and USD. For other countries, Export / Total Export Ratio represents the share of monthly car exports from Georgia to each respective country relative to Georgia's total monthly car exports, measured in units and USD. GDP is reported in current prices and on a monthly basis. Inflation rate is reported monthly and calculated on a month-on-month basis. GEL stands for Georgian Lari; AMD for Armenian Dram; KZT for Kazakhstani Tenge; KGS for Kyrgyzstani Som; and RUB for Russian Ruble. All indicators are provided on a monthly basis. Data is sourced from the national statistical offices of the respective countries.

Source: authors' own, 2024

Table 2 presents the Pearson correlation matrix. Several noteworthy relationships are revealed. The values of the Export/Import ratio expressed in units and USD are closely aligned (corr = 0.83, $p < 0.05$). Our dependent variable is negatively associated with the share of cars exported to Russia but positively associated with the share of cars exported to the other three countries. This contrast is particularly pronounced when the values are measured in the number of units of cars (for Russia: $-0.35 \leq corr \leq -0.31$, $p < 0.05$; for the other three countries: $0.16 \leq corr \leq 0.39$, $0.05 < p < 0.1$), and less so when measured in USD (for Russia: $-0.22 \leq corr \leq -0.10$, $p > 0.05$; for the other three countries: $0.13 \leq corr \leq 0.44$, $0.05 < p < 0.1$). The export shares to Russia and to the other three countries have significant negative correlations with each other (in units: corr = -0.41, $p < 0.05$; in USD: corr = -0.24, $p < 0.05$). It indicates a potential trade-off between exports to Russia and these three countries. Among the control variables, the share of cars exported from Georgia is positively and significantly correlated with the average GDP measure in the three countries (in units: corr = 0.26, $p < 0.05$; in USD: corr = 0.40, $p < 0.05$).

The analysis of the independent variables suggests limited concern for multicollinearity. The highest variance inflation factor (VIF) among the model's independent variables, except for the dummy and interaction terms, is below 2.5 (corresponding to a tolerance level of 0.4). This value is significantly lower (with a higher tolerance level) than the commonly referenced threshold of 10 (corresponding to a tolerance level of 0.1), indicating that multicollinearity is unlikely to affect the model's outcomes. Furthermore, we have employed the White test, Shapiro- Wilk test, and Linktest to assess the econometric fitness of the model. These diagnostic tests raise no econometric concerns.

Table 2:

Pearson correlation matrix

		1	2	3	4	5	6	7	8	9	10	11
1	Export / Import ratio units (%)											
2	Export / Import ratio USD (%)	0.83*										
3	Export Rus / Total Export ratio units (%)	-0.31*	-0.35*									
4	Export Arm, Kaz, Kyr / Total Export ratio units (%)	0.16	0.39*	-0.41*								
5	Export Rus / Total Export ratio USD (%)	-0.10	-0.22	0.81*	-0.34*							
6	Export Arm, Kaz, Kyr / Total Export ratio USD (%)	0.13	0.44*	-0.29*	0.90*	-0.24*						
7	GDP Rus (million USD)	0.15	0.22	-0.10	0.26*	0.27*	0.38*					
8	Inflation rate Rus (%)	-0.08	-0.11	0.12	-0.07	0.48*	0.05	0.67*				
9	USD / RUB growth rate (%)	-0.04	0.01	0.08	-0.03	-0.01	0.03	-0.03	-0.13			
10	GDP Arm, Kaz, Kyr (million USD)	0.26*	0.40*	-0.13	0.35*	0.09	0.51*	0.82*	0.33*	0.00		
11	Inflation rate Arm, Kaz, Kyr (million USD)	-0.12	-0.14	0.52*	-0.27*	0.75*	-0.01	0.58*	0.74*	0.02	0.36*	
12	USD/AMD, USD/KZT, USD/KGS growth rate (%)	0.03	0.08	-0.06	-0.10	-0.11	-0.09	-0.09	-0.19	0.67*	0.02	-0.15

Note: *p-value < 0.05

Source: authors' own, 2024

5.2 Multivariate results

Table 3 presents the results of the Ordinary Least Squares (OLS) regression analysis based on a dataset of 78 observations, testing H1. The dependent variable is the number of cars exported to Russia relative to the total car exports from Georgia. In Columns 1 and 2, the dependent variable is used in units and USD, respectively, without the inclusion of control variables. Columns 3 and 4 also use the dependent variable in units and USD, but with the inclusion of control variables.

The model's explanatory variables account for a substantial share of the export variance, indicating a good fit (R-square varying from 10% to 23%, adjusted R-square varying from 7% to 16%). The model's explanatory power increases with the inclusion of control variables.

Our hypothesis is tested through the interaction term, which shows a highly significant and negative coefficient across all models ($-58.13 \leq b \leq -9.49$, $p < 0.01$), supporting H1. The results suggest that after the imposition of restrictive measures targeting the circumvention of sanctions through third countries, the volume of cars re-exported from Georgia to Russia decreased significantly. Among the control variables, GDP has a significant positive effect on the number of cars exported from Georgia relative to total car imports ($0.45 \leq b \leq 0.50$, $p < 0.01$). This finding aligns with prior literature (Heid et al., 2021; Martinez-Zarzoso, 2003; Santana- Gallego et al., 2016) that suggests GDP growth in the importing country positively influences the export volumes of the exporting country. In contrast, inflation has a significant but negative relationship with the dependent variable ($-1.67 \leq b \leq -1.48$, $0.05 < p < 0.1$), implying that rising prices

in the importing country negatively affect the export volumes of the exporting country. Currency fluctuation shows no statistical significance in influencing the export volumes from the exporting country.

Table 3:

Regression results – the impact of sanctions on car exports to Russia

	W/O controls		With controls	
	Units	**USD**	**Units**	**USD**
Main variables:				
Export Rus	-2.68***	-0.61	-2.41***	-0.42
	(-3.05)	(-0.84)	(-3.49)	(-0.45)
Treatment	-0.13**	0.13**	-0.17***	0.10
	(-2.27)	(2.57)	(-2.68)	(1.58)
Variable of interest:				
Interaction	-9.49***	-37.46***	-16.73***	-58.13***
	(-3.57)	(-2.90)	(-3.43)	(-3.67)
Control variables:				
GDP			0.50***	0.45***
			(2.80)	(2.86)
Inflation			-1.48*	-1.67**
			(-1.74)	(-2.40)
Currency			-0.15	-0.01
			(-0.38)	(-0.04)
R^2	0.14	0.10	0.23	0.23
R^2_adjusted	0.11	0.07	0.16	0.16

Note: The table reports the coefficients and robust standard errors (in parentheses) for the full sample (N=78) based on OLS regressions. Columns 1 and 2 display the share of car exports from Georgia relative to total car imports to Georgia in units and USD, respectively, without the inclusion of control variables. Columns 3 and 4 present the dependent variable in units and USD, respectively, but with the inclusion of control variables. The variable "Interaction" represents an interaction term between the car export share to Russia compared to total car exports from Georgia and a dummy variable that indicates 1 for the period after the imposition of restrictive measures targeting third countries and 0 otherwise (Export Rus * Treatment).
***p-value < 0.01; **p-value < 0.05; *p-value < 0.10

Source: authors' own, 2024

Table 4 presents the results of the Ordinary Least Squares (OLS) regression analysis based on a dataset of 78 observations, testing H2. The dependent variable is the number of cars exported to three intermediary countries—Armenia, Kazakhstan, and Kyrgyzstan—relative to the total car exports from Georgia. Again, Columns 1 and 2 refer to models in units and USD, respectively, both without control variables. As for the columns 3 and 4, the same models are applied but with control variables.

The model's explanatory variables account for a substantial share of the export variance, indicating a good fit (R-square varying from 6% to 34%, adjusted R-square varying from 2% to 29%). The model's explanatory power increases with the inclusion of control variables.

Our H2 is tested through the interaction term, which is positive across all models ($0.95 \leq b \leq 1.66$). However, the coefficient is significant when measured in USD ($p < 0.01$ with control variables, Column 4) but not when measured in units ($p > 0.1$ with control variables, Column 3). Thus, H2 is supported when measured in USD but is rejected when measured in units. The results suggest that after the imposition of restrictive measures targeting the circumvention of sanctions through third countries, the volume of cars re-exported from Georgia to the other three countries increased significantly when measured in USD. The discrepancy between the results in USD and units is likely due to the fact that the restrictive measures required more complicated circumvention routes, leading to increased logistics and transportation costs for all types of cars. However, these increased costs are likely to have had a more significant negative impact on budget car buyers than on luxury car buyers. As a result, the share of luxury cars may have increased within the total number of exported cars during the post-regulation period.

Among the control variables, GDP and inflation again have significant influence on the number of cars exported from Georgia, whereas currency fluctuation shows no statistical significance in influencing the export volumes from the exporting country.

Table 4:

Regression results – the impact of sanctions on car exports to Armenia, Kazakhstan, Kyrgyzstan

	W/O controls		With controls	
	Units	**USD**	**Units**	**USD**
Main variables:				
Export Arm, Kaz, Kyrg	0.19	0.28***	0.08	0.20**
	(1.54)	(3.09)	(0.77)	(2.55)
Treatment	-1.11***	-0.78*	-1.13	-1.40***
	(-3.36)	(-1.77)	(-1.52)	(-3.81)
Variable of interest:				
Interaction	1.23***	0.95*	1.15	1.66***
	(2.86)	(1.74)	(1.21)	(3.68)
Control variables:				
GDP			0.34***	0.24***
			(2.67)	(3.17)
Inflation			-1.56*	-1.18**
			(-1.90)	(-2.36)
Currency			-0.15	0.60
			(-0.16)	(0.75)
R^2	0.06	0.21	0.20	0.34
R^2_adjusted	0.02	0.18	0.13	0.29
F	5.43***	10.30***	1.82	8.27***

Note: The table reports the coefficients and robust standard errors (in parentheses) for the full sample (N=78) based on OLS regressions. Columns 1 and 2 display the share of car exports from Georgia relative to total car imports to Georgia in units and USD, respectively, without the inclusion of control variables. Columns 3 and 4 present the dependent variable in units and USD, respectively, but with the inclusion of control variables. The variable "Interaction" represents an interaction term between the car export share to Armenia, Kazakhstan, and Kyrgyzstan compared to total car exports from Georgia and a dummy variable that indicates 1 for the period after the imposition of restrictive measures targeting third countries and 0 otherwise (Export Arm, Kaz, Kyrg * Treatment).
***p-value < 0.01; **p-value < 0.05; *p-value < 0.10

Source: authors' own, 2024

For robustness purposes, we conduct our analysis for the sample without the Covid-19 period (Pirveli et al., 2022). The exclusion of Covid-19 period from the sample (N=54) did not alter our main findings, further corroborating the consistency and reliability of our initial results. Overall, the sensitivity tests strengthen the robustness of our primary conclusions.

6. Discussion

The findings of this study provide insights into the dynamics of Georgia's role in circumventing Western sanctions on Russia, particularly through the re-exportation of cars. Our analysis confirms the hypothesis that restrictive measures countering the circumvention of sanctions have led to a significant decrease in the direct re-export of cars from Georgia to Russia due to secondary sanction effect. However, this has been countered by a notable increase in the re-export of cars from Georgia to other third countries which have a common trade block with Russia, due to exterritorial and secondary sanctions effects. This shift suggests that while direct routes were curtailed, alternative pathways were utilized to maintain the flow of sanctioned goods. It may indicate that the overall volume of cars ultimately reaching the Russian market has not decreased as substantially. The ability to adapt and find new pathways highlights the resilience and adaptability of Georgian traders in maintaining economic activity under restrictive measures.

The re-exportation of sanctioned goods through third countries poses significant strategic risks to Georgia's alignment with Western sanctions policies. While the immediate economic benefits of increased trade activity are evident, the long-term risks associated with non-compliance and the potential for secondary sanctions are substantial. Georgia's strategic aspiration to align with EU policies and pursue EU membership necessitate strict adherence to international sanctions regimes. This triggers broader geopolitical and strategic challenges for Georgia's alignment with the EU's Common Foreign and Security Policy (CFSP). These risks are complex and rooted in both quantitative disparities and qualitative divergences in policy alignment, which have tangible implications for Georgia's international standing and aspirations for EU membership (Dolidze et al., 2023).

The significant volume of re-exports, especially involving sanctioned cars, serves as a quantitative indicator of misalignment with EU sanctions regimes and trade policies. This disparity is underscored by the number of EU declarations open for alignment by third countries, with Georgia aligning with only a fraction. For instance, in 2022, out of 107 EU declarations open for alignment, Georgia aligned itself with only 51 (Akobia, 2023), and the relative alignment rate stood at 43% in 2023, as compared to 58% in 2020 (Kakachia et al., 2024). This quantitative gap highlights the need for substantial improvements in aligning Georgia's policies with EU CFSP objectives, whereas the existence of re-exportation channels of sanctioned goods from Georgia to Russia is further damaging this alignment.

Beyond the quantitative aspect, the nature of re-exporting sanctioned cars signifies a qualitative misalignment with the EU's CFSP. The principles and objectives of the CFSP, including upholding international norms, promoting human rights, and countering authoritarian practices, are contradicted by Georgia's facilitation of re-export channels for sanctioned goods. This qualitative divergence is particularly significant in bilateral diplomacy outlook, where Georgia demonstrated the lowest rate of convergence with the EU's initiatives, aligning with only 31 out of 92 declarations concerning specific countries (Akobia, 2023). Such qualitative divergences raise concerns about Georgia's commitment to EU values and norms, impacting its credibility as a potential EU member.

The findings underscore the need for Georgia to enhance its monitoring and enforcement mechanisms to prevent the circumvention of sanctions. Strengthening customs controls, improving transparency in trade transactions, and fostering international cooperation are critical steps in mitigating the risks associated with sanctions evasion.

7. Conclusion

The circumvention of Western sanctions through third countries like Georgia poses significant challenges for global sanctions enforcement. Our study focuses on Georgia's role in the re-export of sanctioned cars to Russia, revealing a dual-edged dynamic: while this practice offers immediate economic benefits, it compromises Georgia's strategic alignment with Western policies and increases the risk of secondary sanctions.

The paper makes theoretical contributions by empirically validating existing frameworks related to sanctions evasion and trade dynamics through a quantitative research method. The empirical support provided for theoretical models that explain the impact of sanctions on trade volumes and the role of third countries in circumventing sanctions enriches the academic discourse on sanctions as a tool of foreign policy.

The practical implications of our findings extend to several policy considerations.

Firstly, robust international cooperation and information sharing among regulatory bodies are imperative to combat sanctions evasion effectively. The interconnected nature of global trade necessitates collaborative efforts to close loopholes in trade mechanisms and prevent activities that undermine sanctions regimes. Secondly, our study highlights the balance third countries must maintain between short-term economic benefits and long-term strategic objectives. Policymakers in Georgia and other nations facing similar dilemmas must ensure their actions support broader geopolitical goals and comply with international sanctions regimes. This balance is essential for sustaining international norms and achieving long-term integration with the global community.

Policymakers in Georgia and other third countries involved in re-export activities must prioritize regulatory reforms to enhance transparency and accountability in trade practices. Implementing stringent due diligence measures, enhancing customs enforcement capabilities, and fostering public-private partnerships to promote ethical business conduct are critical steps. By fostering a culture of compliance and ethical trade, these measures align with international norms and bolster the credibility of third countries in the global economic arena. Adopting effective mitigation strategies can enhance Georgia's alignment with EU CFSP objectives and advance its EU membership aspirations. This requires proactive measures and strategic policy adjustments, including closer engagement with EU decision-making processes and active participation in EU initiatives.

While our study employs robust quantitative methods to analyze trade data and measure the impact of sanctions evasion, it is essential to acknowledge certain limitations. The availability and reliability of data, especially concerning hidden trade activities, pose challenges in accurately capturing the full extent of sanctions evasion. Future research could benefit from enhanced data sources and qualitative methodologies to provide a more nuanced understanding of trade behaviors in sanctioned environments. Comparative studies across different regions and industries can enrich our understanding of the varied impacts of sanctions evasion.

Acknowledgment

This work was supported by Shota Rustaveli National Science Foundation of Georgia (SRNSFG) [grant number: FR-21-1248, Project Title: "Corporate Diversity Reporting in Emerging Georgia: A Text Mining Approach Amidst Covid-19"].

References

Akobia, E. (2023). Georgia's (mis)alignment with the EU Foreign Policy. https://civil.ge/archives/542831.

Ahn, D. P., & Ludema, R. D. (2020). The Sword and the Shield: The Economics of Targeted Sanctions. *European economic review 130.* https://doi.org/10.1016/j.euroecorev.2020.103587

Asatiani, I. (2024). How Georgia Supplies Sanctioned Vehicles. https://ifact.ge/en/russia-auto-heaven-in-georgia/

Aušra, M. (2023). Sanctioned luxury cars being shipped to Russia via Lithuania – investigationHow Georgia Supplies Sanctioned Vehicles. https://www.lrt.lt/en/news-in-english/19/2039402/sanctioned-luxury-cars-being-shipped-to-russia-via-lithuania-investigation

Avtostat. (2024). *Продажи новых легковых автомобилей в России в 2023 году и в декабре*. https://www.autostat.ru/press-releases/56543/

Barigazzi, J., Moens, B., & Kijewski, L. (2023). Sanctions-busting States Could Be Next in Brussels' Crosshairs. https://www.politico.eu/article/russia-sanctions-circumvention-eu-mulls-sanctioning-third-countries/

Barry, C. M., & Kleinberg, K. B. (2015). Profiting from Sanctions: Economic Coercion and US Foreign Direct Investment in Third-Party States. *International Organization, 69*(4), 881-912.

Bayramov, V., Rustamli, N., & Abbas, G. (2020). Collateral Damage: The Western Sanctions on Russia and the Evaluation of Implications for Russia's Post-Communist Neighbourhood. *International Economics 162,* 92-109. https://doi.org/10.1016/j.inteco.2020.01.002

Becker, C. M., Bell, T., & Pollard, P. S. (1990). *The Impact of Sanctions on South Africa.* Washington, DC: Investor Research Center.

Berger, D., Easterly, W., Nunn, N., & Satyanath, Sh. (2013). Commercial Imperialism? Political Influence and Trade During the Cold War. *American Economic Review, 103*(2), 863-896. https://doi.org/10.1257/aer.103.2.863

Besedeš, T., Goldbach, S., & Nitsch, V. (2017). You're Banned! The Effect of Sanctions on German Cross-Border Financial Flows. *Economic Policy, 32*(90), 263-318. https://doi.org/10.2139/ssrn.2797085

Biersteker, T., Tourinho, M., & Eckert, S. (2016). Thinking about United Nations Targeted Sanctions. In Biersteker, T., Eckert S., Tourinho M. (Eds.) *Targeted Sanctions: The Impacts and Effectiveness of United Nations Action* (pp. 11-37.). Cambridge University Press.

Bonetti, S. (1998). Distinguishing Characteristics of Degrees of Success and Failure in Economic Sanctions Episodes. *Applied Economics, 30*(6), 805-813. https://doi.org/10.1080/000368498325507

Bove, V., Di Salvatore, J., & Nisticò, R. (2021). Economic Sanctions and Trade Flows in the Neighbourhood. WIDER Working Paper Series wp-2021-184, World Institute

for Development Economic Research (UNU-WIDER). https://www.journals.uchicago.edu/doi/10.1086/725678

Cannes, M. (2000). Country Impacts of Multinational Oil Sanctions. *Contemporary Economic Policy*, *18*(2), 135-44. https://doi.org/10.1111/j.1465-7287.2000.tb00012.x

Caruso, R. (2003). The Impact of International Economic Sanctions on Trade: An Empirical Analysis. *Peace Economics, Peace Science and Public Policy*, *9*(2), 1-1. https://doi.org/10.2139/ssrn.895841

Chupilkin, M., Javorcik, B., & Plekhanov, A. (2023). *The Eurasian Roundabout: Trade flows into Russia through the Caucasus and Central Asia.* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4368618

Cipriani, M., Goldberg L. S., & La Spada, G. (2023). Financial Sanctions, SWIFT, and the Architecture of the International Payment System. *Journal of Economic Perspectives*, *37*(1), 31-52. https://doi.org/10.1257/jep.37.1.31

Council, E. (2024). *Council Regulation (EU) 2024/745 of 23 February 2024 amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilising the situation in Ukraine.* https://eur- lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L 202400745

Draca, M., Garred J., Stickland, L., & Warrinnier, N. (2023). On Target? Sanctions and the Economic Interests of Elite Policymakers in Iran. *The Economic Journal*, *133*(649), 159-200. https://doi.org/10.1093/ej/ueac042

Deardorff, A. V. (1998). Determinants of Bilateral Trade: Does Gravity Work in a Neoclassical World? NBER Chapters, In: *The Regionalization of the World Economy,* NBER. pp. 7-32

Dizaji, S. F., & van Bergeijk, P. A. (2013). Potential Early Phase Success and Ultimate Failure of Economic Sanctions: A VAR Approach with an Application to Iran. *Journal of Peace Research*, *50*(6), 721-736. https://doi.org/10.1177/0022343313485487

Dolidze N., Bobghiashvili, G., & Akobia, E. (2023). EU Integration Coordination in Georgia: Evolution of the Coordination Model and Contingent Factors. *NISPAcee Journal of Public Administration and Policy*, *16*(2), 55-81. https://doi.org/10.2478/nispa-2023-0013

Early, B. R. (2009). Sleeping with your Friends' Enemies: An Explanation of Sanctions-Busting Trade. *International Studies Quarterly*, *53*(1), 49-71. https://doi.org/10.1111/j.1468-2478.2008.01523.x

Eaton, J., & Engers, M. (1992). Sanctions. *Journal of Political Economy*, *100*(5), 899-928. https://doi.org/10.1086/261845

Erport, Y., & Fadlon, T. (2023). Economic Maneuvering: How States Evade Economic Sanctions. *A Multidisciplinary Journal on National Security*, *26*(2), 90-109.

European Commission. (2023). *Georgia Report 2023.* https://neighbourhood-enlargement.ec.europa.eu/georgia-report- 2023_en

Felbermayr, G., Kirilakha A., Syropoulos C., Yalcin E., & Yotov, Y. (2020). The Global Sanctions Database. *European Economic Review 129*. https://doi.org/10.1016/j.euroecorev.2020.103561

Gabritchidze, N. (2023). Georgia bans re-export of Western-imported cars to Russia, Belarus. https://eurasianet.org/georgia-bans-re-export-of-western-imported-cars-to-russia-belarus

Gaur, A., Settles A., & Väätänen, J. (2023). Do Economic Sanctions Work? Evidence from the Russia-Ukraine Conflict. *Journal of Management Studies 60* (6), 1391-1414. https://doi.org/10.1111/joms.12933

Geostat. (2024). *External Trade Portal Data.* https://www.geostat.ge/ka

German, T. (2015). Heading West? Georgia's Euro-Atlantic Path. *International Affairs*, *91*(3), 601-614.

German, T. (2022). Russia and the South Caucasus: The China Challenge. *Europe-Asia Studies*, *74*(9), 1596-1615. https://doi.org/10.1080/09668136.2022.2071843

Ghironi, F., Kim D., & Ozhan, G. K. (2024). *International Economic Sanctions and Third-Country Effects.* IMF Economic Review, *72*(2), 611–652. https://doi.org/10.1057/s41308-023-00232-9

Glick, R., & Taylor A. M. (2010). Collateral Damage: Trade Disruption and the Economic Impact of War. *The Review of Economics and Statistics*, *92*(1), 102-127. https://doi.org/10.1162/rest.2009.12023

Haidar, J. (2017). Sanctions and Export Deflection: Evidence from Iran. *Economic Policy*, *32*(90), 319-355. https://doi.org/10.1093/epolic/eix002

Han, B. (2018). The Role and Welfare Rationale of Secondary Sanctions: A Theory and a Case Study of the US Sanctions Targeting Iran. *Conflict Management and Peace Science*, *35*(5), 474-502. https://doi.org/10.1177/0738894216650836

Heid, B., Larch M., & Yotov, Y. V. (2021). Estimating the Effects of Non-Discriminatory Trade Policies within Structural Gravity Models. *Canadian Journal of Economics*, *54*(1), 376-409. https://doi.org/10.1111/caje.12493

Hufbauer, G., & Oegg, B. (2003). The Impact of Economic Sanctions on US Trade: Andrew Rose's Gravity Model. *PIIE Brief.*

Hufbauer, G. C., Schott J. J., Elliot, K., & Oegg, B. (2008). Economic Sanctions Reconsidered. *Peterson Institute for International Economics.*

Hufbauer, G. C., Schott J. J., & Elliott, K. A. (1990). *Economic Sanctions Reconsidered: History and Current Policy* Peterson Institute, Washington DC.

Jiménez, J. L., & Perdiguero, J. (2019). Difference-in-Difference. In A. Marciano & G. B. Ramello (Eds.) *Encyclopedia of Law and Economics* (pp. 551-555). Springer New York. https://doi.org/10.1007/978-1-4614-7753-2_664

Jones, L. (2015). *Societies under Siege: Exploring How International Economic Sanctions (Do Not) Work*. Oxford University Press.

Kaempfer, W. H., & Lowenberg, A. D. (1988). The Theory of International Economic Sanctions: A Public Choice Approach. *American Economic Review*, *78*(4), 786-793.

Kakachia K., Lebanidze B., Skardžiute-Kereselidze, R., & Samkharadze, N. (2024). Bridging the Divide: Georgia's Alignment with the EU's Foreign Policy. Policy Paper #42, May 2024. https://gip.ge/wp-content/uploads/2024/05/Policy-Paper-42-_ENG.pdf

Kakachia, K., & Minesashvili S. (2015). Identity Politics: Exploring Georgian Foreign Policy Behavior. *Journal of Eurasian Studies*, *6*(2), 171-180. https://doi.org/10.1016/j.euras.2015.04.002

Kamei, K., Sharma, S., & Walker, M. J. (2023). Sanction Enforcement among Third Parties: New Experimental Evidence from Two Societies. Keio-IES Discussion Paper Series 2023-010. *Institute for Economics Studies, Keio University*. https://ideas.repec.org/p/keo/dpaper/2023-010.html

Karapetyan, R. (2023). South Caucasus in the Phase of Russian-Ukrainian War: New Security Challenges and Possible Scenarios for Development. *Journal of Political Science: Bulletin of Yerevan University*, *2*(3), 32-46. https://doi.org/10.46991/JOPS/2023.2.6.032

Kirilakha, A., Felbermayr G. J., Syropoulos C., Yalcin E., & Yotov, Y. V. (2021). The Global Sanctions Data Base (GSDB): An Update That Includes the Years of the Trump Presidency. In van Bergeijk P. A. (Eds.) *Research Handbook on Economic Sanctions*, (pp. 62-106). Edward Elgar Publishing. https://doi.org/10.4337/9781839102721.00010

Kohl, T., & Reesink, C. K. (2019). Sticks and Stones: Sanction Threats, Impositions, and Their Effect on International Trade. In Besedeš T., Nitsch V. (Eds.) *Disrupted Economic Relationships: Disasters, Sanctions, Dissolutions* (pp. 103-130). MIT Press.

Liadze, I., Macchiarelli C., Mortimer-Lee P., & Sanchez, J. P. (2023). Economic Costs of the Russia-Ukraine War. *The World Economy*, *46*(4), 874-886. https://doi.org/10.1111/twec.13336

Lukaszuk, P. (2021). You Can Smuggle but You Can't Hide: Sanction Evasion During the Ukraine Crisis. *Aussenwirtschaft*, *71*(1), 73-125.

Mahlstein, K., McDaniel C., Schropp S., & Tsigas, M. (2022). Estimating the Economic Effects of Sanctions on Russia: An Allied Trade Embargo. *The World Economy*, *45*(11), 3344-3383. https://doi.org/10.1111/twec.13311

Martinez-Zarzoso, I. (2003). Gravity Model: An Application to Trade Between Regional Blocs. *Atlantic Economic Journal*, *31*, 174-187. https://doi.org/10.1007/BF02319869

McLean, E. V., & Whang T. (2010). Friends or Foes? Major Trading Partners and the Success of Economic Sanctions. *International Studies Quarterly*, *54*(2), 427-447. https://doi.org/10.1111/j.1468-2478.2010.00594.x

Meyer, J. (2009). Second Thoughts on Secondary Sanctions. *University of Pennsylvania Journal of International Law*, *30*(3), 905-968.

Morgan, T. C., Syropoulos C., Yotov Y. V. (2023). Economic Sanctions: Evolution, Consequences, and Challenges. *Journal of Economic Perspectives 37* (1), 3-29. https://doi.org/10.1257/jep.37.1.3

Noland, M. (2009). The (non-)impact of UN Sanctions on North Korea. *Asia Policy*, *7*(1), 61-88. https://doi.org/10.1353/asp.2009.0047

Pala, T. (2021). The Effectiveness of Economic Sanctions: A Literature Review. *NISPAcee Journal of Public Administration and Policy*, *14*(1), 239-259. https://doi.org/10.2478/nispa-2021-0009

Pirveli, E., Shugliashvili T., Machavariani N. (2022). Economic Policy of COVID-19: an Emerging Country Perspective. *International Journal of Economic Policy in Emerging Economies*, *15*(2-4), 214-250. https://doi.org/10.1504/IJEPEE.2022.121348

RFE/RL. (2023). Georgia Re-Exporting "Dual-Use" Products for Russia Stirs Controversy. https://civil.ge/archives/585891

Ruys, T., & Ryngaert, C. (2020). *Secondary Sanctions: a Weapon out of Control? The International Legality of, and European Responses to, US Secondary Sanctions.* British Yearbook of International Law, pp. 1-116. https://doi.org/10.1093/bybil/braa007

Sabanadze, N. (2002). International Involvement in the South Caucasus. ECMI Working Papers.

Santana-Gallego, M., Ledesma-Rodríguez F. J., & Pérez-Rodríguez J. V. (2016). International Trade and Tourism Flows: An Extension of the Gravity Model. *Economic Modelling*, *52*, 1026-1033. https://doi.org/10.1016/j.econmod.2015.10.043

Sonnenfeld, J., Tian S., Sokolowski F., Wyrebkowski M., Kasprowicz M. (2022). Business Retreats and Sanctions Are Crippling the Russian Economy. Working Paper. https://doi.org/10.2139/ssrn.4167193Souleimanov, E. A., Fedorov Y. (2023). The

War in Ukraine: Risks and Opportunities For the 'Post-Soviet South'. *Middle East Policy*, *30*(3), 95-106. ttps://doi.org/10.1111/mepo.12709

Syropoulos, C., & Yotov Y. (2023). Reflections on the Impact of Economic Sanctions. EconPol Forum, CESifo, vol. 24 (3), pp. 10-14.

Shin, G., Choi S.-W., & Shali, L. (2015). Do Economic Sanctions Impair Target Economies? *International Political Science Review*, *37*(4), 485-99. https://doi.org/10.1177/0192512115590203

Tarka, P. (2018). An Overview of Structural Equation Modeling: Its Beginnings, Historical Development, Usefulness and Controversies in the Social Sciences. *Quality & Quantity*, *52*(1), 313-354. https://doi.org/10.1007/s11135-017-0469-8

Transparency International. (2023). *Georgia's Economic Dependence on Russia Continues to Grow: January-June 2023.* https://www.transparency.ge/en/post/georgias-economic-dependence-russia-continues-grow-january-june-2023

Torbat, A. E. (2005). Impacts of the US trade and Financial Sanctions on Iran. *World Economy*, *28*(3), 407-434. https://doi.org/10.1111/j.1467-9701.2005.00671.x

Van Bergeijk, P. A. (1995). The Impact of Economic Sanctions in the 1990s. *The World Economy*, *18*(3), 443-455. https://doi.org/10.1111/j.1467-9701.1995.tb00223.x

Van Bergeijk, P., Biersteker T. (2015). How and When Do Sanctions Work? The evidence. In *On Target? EU Sanctions as Security Policy Tools*, *European Union Institute for Security Studies,* 17-28. Available at doi.org/10.2815/710375

Van Bergeijk, P. A., & Brakman, S. (2010). The Gravity Model in International Trade: Advances and Applications. *Cambridge University Press.* https://doi.org/10.1017/CBO9780511762109

Van Bergeijk, P. A. (2022). Sanctions Against the Russian War on Ukraine: Lessons from History and Current Prospects. *Journal of World Trade*, *54*(4), 571-586. https://doi.org/10.54648/TRAD2022023

Van der Have, N. (2020). The Proposed EU Human Rights Sanctions Regime. *Security and Human Rights*, *30*(1-4), 56- 71. https://doi.org/10.1163/18750230-02901009

Vedomosti, (2023). *«Открытие Авто»: продажи премиальных автомобилей вновь растут.* https://www.vedomosti.ru/press_releases/2023/11/15/otkritie-avto-prodazhi-premialnih-avtomobilei-vnov-rastut

Webber, C. (2023). Georgia's Strategic Path: Economic Integration as a Strategic Pathway. *Caucasus Survey*, *11*(2-3), 341-361.