Seizing the Reconstruction Dividend: Strategic Pathways for Slovakia in Ukraine's (Post)War Economy

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Abstract: The Russian invasion of Ukraine has fundamentally disrupted Eastern European trade dynamics while simultaneously creating new opportunities for EU exporters in Ukraine's emerging reconstruction market. This study explores Slovakia's untapped export potential in Ukraine's post-war economy, addressing a notable gap in research that mainly focuses on Ukraine's exports to the EU rather than the reverse direction. The specific research objective is to identify and quantify sector-level export opportunities for Slovak firms using a two-stage methodology combining Trade Potential and Export Gap analysis at the HS-6 product level for the period 2014–2023, drawing on data from ITC Trade Map and UN Comtrade. The analysis identifies over USD 500 million in unrealized opportunities across key sectors — automotive components, industrial machinery, electrical equipment, and consumer goods. Early strategic engagement, localized production, ESG-aligned offerings, and active participation in donor-funded procurement could position Slovakia as a key supplier in Ukraine's recovery. Policy and managerial recommendations emphasize targeted market entry strategies, logistics innovation, and export promotion instruments tailored to reconstruction-driven demand.

Keywords: trade potential, export gap, comparative advantage, Slovakia, EU, Ukraine

JEL Classification codes: F14, F15, O24

INTRODUCTION

The Russian invasion of Ukraine in 2022 fundamentally disrupted Eastern European trade dynamics, prompting a reassessment of cross-border economic resilience. While research has largely focused on Ukraine's export performance under the Deep and Comprehensive Free Trade Area (DCFTA), especially their exports to the EU, there is a notable gap concerning how EU countries might expand their exports to Ukraine (Haletska, 2025; Eurostat, 2026).

For Slovakia, a small, open economy with a strong industrial base, particularly in automotive, electronics, machinery, and chemicals, the Ukrainian market represents a strategic but underexploited opportunity (Panchenko, 2024). Geographic proximity and complementary industrial profiles suggest significant potential for targeted export expansion.

At the EU level, Ukraine remains geopolitically important yet economically minor: in 2022, trade with Ukraine accounted for less than 1% of the EU's total external trade, while more than half of Ukraine's trade was with the EU (Akhvlediani & Movchan, 2024). By 2024, total EU Ukraine trade in goods had grown substantially, €67.2 billion, highlighting rising integration despite continued volatility (European Commission, 2025a).

EU member states bordering Ukraine face unique policy challenges: balancing support for Ukraine's recovery with domestic producer concerns and adapting to evolving trade frameworks that shifted from wartime trade concessions back toward pre-war norms.

Beyond bilateral trade considerations, Ukraine holds strategic importance for Slovakia and the European Union as a whole. In the post-war period, Ukraine is expected to become one of the largest reconstruction markets in Europe, with substantial demand for industrial goods, construction materials, and advanced technologies (European Investment Bank, 2025). The scale of rebuilding efforts, estimated by the World Bank at over USD 400 billion, offers opportunities for Slovak and EU firms to participate in infrastructure modernization, energy system upgrades, and industrial capacity development (World Bank, 2025). Ukraine's geographic position further strengthens its role as a potential transit hub between the EU and Asian markets, particularly through the Black Sea and overland transport corridors. For Slovakia, leveraging proximity, existing logistical connections, and industrial complementarity could secure a long-term role in these supply chains, while for the EU, Ukraine's integration promises to expand the Union's strategic depth, diversify resource supply routes, and enhance regional stability.

This study fills that gap by applying trade potential and export gap analysis. Specifically, the research objective is to identify and quantify sector-level export opportunities for Slovakia in Ukraine's post-war market by combining Trade Potential (TP) and Export Gap (EG) analysis at the HS-6 product level for the period 2014–2023. The study's contribution is threefold: it adapts established trade potential methodologies to a conflict-affected bilateral trade context; it provides the first systematic TP/EG analysis directed at Slovak exports to Ukraine; and it derives concrete, sector-specific strategic recommendations for Slovak firms and policymakers. The findings offer actionable insights for trade promotion agencies and policymakers engaged in cross-border economic cooperation amid geopolitical uncertainty.

1 LITERATURE REVIEW

Research on Slovak–Ukrainian trade relations remains relatively scarce compared to studies on Ukraine's overall integration into the EU economy. Early works emphasized historical, geographic, and industrial linkages as key factors facilitating trade (Bebiaková, 2016; Kašťáková et al., 2019; Lendel, 2021). These studies highlighted the role of shared industrial traditions, energy cooperation, and transit infrastructure in shaping bilateral exchange, but they did not quantify untapped trade opportunities in specific product categories.

The literature on EU–Ukraine industrial and trade integration underscores both opportunities and structural weaknesses. Research on Ukraine's export capacity has often focused on sector-specific performance, especially agriculture and raw materials, while employing varied methods to estimate trade potential.

For instance, Melnik et al. (2024) developed a comprehensive toolkit to measure Ukraine's grain export capacity under global trade regulations, identifying infrastructure, logistics, and policy coordination as key determinants. Ishchuk and Sozanskyy (2024) stress the risk of Ukraine remaining a raw-material exporter unless structural reforms prioritize high-value manufacturing sectors

Post-war economic planning for Ukraine has centered on macroeconomic stabilization, infrastructure rebuilding, and targeted sectoral recovery.

Leshchenko and Leshchenko (2023) identified EU integration, efficient resource use, and innovation support as key priorities, stressing the need for strategic orientation of reconstruction investments. Riznyk (2023) emphasised foreign direct investment and EU-standard alignment as the pillars for sustainable recovery, with priority given to logistics, quality infrastructure, and legislative reforms

While much of the existing literature focuses on Ukraine's export potential to the EU, particularly in the context of the DCFTA, far less attention has been devoted to the inverse perspective, assessing how EU member states can strategically position themselves within the Ukrainian market. This asymmetry overlooks the fact that, in a post-war reconstruction environment, Ukraine's import demand in selected industrial and consumer sectors may grow at rates surpassing its export expansion, creating significant openings for competitive EU suppliers. We see clear scope for research that evaluates this "reverse" trade potential by adapting established trade potential and export gap methodologies to the EU-to-Ukraine direction, incorporating post-conflict variables such as infrastructure rehabilitation, donor-funded procurement, and accelerated regulatory convergence. Such an approach not only broadens the analytical lens of DCFTA-related studies but also offers a framework for quantifying and prioritizing sector-specific opportunities for EU firms in Ukraine's evolving economic landscape.

Several scholars have explored trade potential through methodological approaches such as trade complementarity indices, indicative trade potential (ITP) measures, and export gap analysis. Helmers and Pasteels (2006) proposed an operational commodity-level method to estimate indicative trade potential by identifying sectors where partner countries' export supply overlaps with import demand. This approach has been widely applied in bilateral trade studies for emerging markets, particularly in unstable or transitioning economies, where gravity models may be less reliable. Bano et al., (2013) similarly applied demand–supply matching to ASEAN–New Zealand trade, identifying high-potential goods by aligning revealed comparative advantage (RCA) with import significance, which directly informs sector-targeted trade policy.

The concept of the export gap has been adapted for Central and Eastern European (CEE) economies to identify unrealized bilateral trade flows. Bronček (2019) demonstrated this approach for Slovakia's exports to China, integrating RCA and import intensity to reveal product categories with high potential yet low actual penetration. Zábojník and Borovská (2021) applied a similar method in evaluating Slovakia's export performance in third-country markets, showing that despite strategic export policies, the gap often widened, underscoring the need for more targeted support instruments.

More broadly, studies of Slovak trade competitiveness reveal that Slovakia excels in automotive, electronics, and iron and steel exports, due to both price- and quality-based competitiveness (Brinčíková, 2023). The RCA-based approach in her work offers a robust basis for assessing comparative advantages in specific HS sectors.

Studies focusing on Ukraine's trade dynamics within the EU framework show that despite tariff liberalization under the DCFTA, non-tariff barriers, infrastructural bottlenecks, and market uncertainty limit the realization of trade potential (Akhvlediani and Movchan, 2024; Yatsenko et al., 2020). Boyko et al. (2024) note that EU neighbors like Slovakia can play a stabilizing role by supplying high-value-added industrial goods during reconstruction, but sustained growth requires coordination between private sector actors and government agencies.

Quantifying trade potential often involves comparative advantage measures, but recent literature emphasizes combining RCA with other indicators to better reflect market readiness. Ravishankar and Stack (2014) argue that infrastructure integration and currency stability

significantly enhance trade efficiency in Eastern Europe, suggesting that physical and institutional connectivity are as important as cost competitiveness. Kabir and Salim (2011) reach similar conclusions in their ASEAN–EU study, showing that integrated supply chains magnify bilateral trade potential beyond what RCA alone predicts.

From a policy perspective, identifying high-potential sectors is critical for aligning export promotion measures with market demand. Bezpartochnyi and Britchenko (2022) argue that Slovak–Ukrainian trade cooperation in sectors such as energy, logistics, and agrifood could be scaled through targeted bilateral initiatives. World Bank (2023) reports also point to the importance of securing supply chains for agricultural inputs and industrial components to ensure resilience during crises.

Meanwhile, international research on regional economic integration offers insights into mechanisms underlying comparative advantage. Di Clemente et al. (2022) demonstrate how revealed comparative advantage (RCA) and co-specialization networks inform productivity convergence among Central and Eastern European (CEE) economies. These findings underscore the utility of network-informed RCA analyses when identifying trade potential.

The complementarity of trade and foreign direct investment (FDI) also shapes export dynamics in CEE economies. Albulescu and Goyeau (2016) provide evidence that outward FDI reinforces trade integration in Slovakia and its peers, suggesting that investment flows could amplify Slovak exports to Ukraine as supply chains reconnect.

The gap in the literature lies in integrating these strands, bilateral trade history, quantitative potential estimation, and policy-oriented sector targeting, into a unified framework for Slovakia–Ukraine trade. Most existing studies either focus on aggregate trade trends or on Ukraine's exports to the EU, leaving the "reverse" direction — EU member state exports to Ukraine — insufficiently explored. Unlike Bronček (2019) and Zábojník and Borovská (2021), who apply EG and RCA methods to Slovak exports in third-country markets under stable conditions, this study adapts these tools to a conflict-affected setting where standard gravity model assumptions do not hold. Unlike Akhvlediani and Movchan (2024) and Boyko et al. (2024), who examine aggregate EU–Ukraine trade integration, this paper operates at the HS-6 product level, enabling granular, sector-specific targeting. This research therefore addresses the identified gap by applying a dual-method TP/EG framework to identify concrete, high-impact opportunities for Slovak exporters in the Ukrainian market under current geopolitical constraints, offering a methodological template applicable to other EU–Ukraine bilateral trade studies.

2 METHODOLOGY

The aim of this study is to uncover reconstruction-driven export opportunities for Slovakia in Ukraine by merging Trade Potential (TP) and Export Gap (EG) analysis. This approach not only measures where demand and Slovak strengths intersect but also reveals niche markets that can be captured early, before they become saturated, turning post-war recovery into a long-term competitive advantage.

This study employs a two-stage analytical framework combining Trade Potential and Export Gap methodologies to identify untapped opportunities for Slovak exports to Ukraine. The analysis is conducted at the Harmonized System 6-digit (HS-6) level for the period 2014–2023, using data from the International Trade Centre's Trade Map and UN Comtrade databases (6,552 products).

Trade Potential serves as the initial screening tool to detect sectors where Slovakia's export supply aligns with Ukraine's import demand. This approach is grounded in the Indicative Trade

Potential methodology proposed by Helmers and Pasteels (2006) and further developed in applications such as Bano et al., (2013).

The formula for TP is:

$$TP = [min\,(SE, MI) - ET] \quad (1)$$

where: min indicates the minimum value between SE and MI;
SE – global export of the supplier country (e.g., of Slovakia);
MI – global import of the partner market (e.g., of Ukraine);
ET – existing bilateral export (export of the product from Slovakia to the trading partner, e.g., Ukraine).

High TP values indicate product categories with both adequate Slovak supply and significant Ukrainian demand, yet low current bilateral trade.

Once high-TP sectors are identified, the Export Gap method provides a refined assessment by incorporating competitiveness and demand intensity. This method combines the Revealed Comparative Advantage (RCA) index (Balassa, 1965) with the Import Significance Index (IS) as applied by Bronček (2019). The EG formula is:

$$EG_{jik}^{N} = \left(\frac{\sum_{n0}^{n} \frac{X_{jk}}{M_{wk}}}{(n-n0)+1} - \frac{X_{jik}^{n}}{M_{ik}^{n}} \right) M_{ik}^{n}, \quad (2)$$

where: EG_{jik}^{N} is the export gap of country j for product k exported to country iii in year n;
X_{jk} is the total export of product k by country j;
M_{wk} is the global import of product k;
X_{jik}^{n} is the export of product k from country j to country i in year n;
M_{ik}^{n} is the import of product k by country i in year n;
n is the year for which the export gap is calculated;
n0 is the initial year of the interval over which the average RCA_{jk} index is computed.

Product selection followed a two-stage filtering procedure. In the first stage, all HS-6 products with a positive TP value were retained, yielding an initial set of candidates across the full 6,552-product universe. In the second stage, EG was calculated for the TP-positive subset, and products were ranked by their EG value. Final inclusion required a product to satisfy three criteria simultaneously: (1) a positive TP value indicating overlapping Slovak supply and Ukrainian demand; (2) an RCA index above 1.0, confirming Slovakia's revealed comparative advantage in global exports of that product; and (3) an IS index above 1.0 for Ukraine, confirming above-average Ukrainian import intensity relative to global norms. The eight products presented in Table 2 represent those meeting all three criteria with the highest combined EG values. This threshold-based selection ensures that the results reflect both competitive supply capacity and demonstrated import demand, rather than statistical artefacts or one-sided signals.

The RCA is calculated as:

$$RCA = \frac{\frac{X_j^i}{X_i}}{\frac{M_j^i}{M_j}} \quad (3)$$

where: X_j^i denotes the exports of product i by country j; X_i represents the global exports of product i, M_j^i refers to country j's imports of product i; and M_j indicates the total imports of all goods by country j. The IS index is calculated as:

$$IS_{jk}^n = \frac{\frac{M_{jk}^n}{M_j^n}}{\frac{M_{wk}^n}{M_w^n}} \quad (4)$$

where: M_{jk}^n represents the import of product k by country j in year n; M_j^n is the total annual import of all products by country j in year n; M_{wk}^n stands for the global import volume of product k in the same year; and M_w^n refers to the total global import of all goods in year n. A country is considered to import product k more intensively than the rest of the world if $IS_{jk}^n > 1$, indicating that the product's share in the country's import basket exceeds its share in global imports. Conversely, if $IS_{jk}^n < 1$, the country imports the product with below-average intensity relative to the global norm. To mitigate possible distortions caused by export and import fluctuations in individual years, we then calculated the arithmetic mean of the RCA and IS values.

The methodological innovation in this study lies in using TP first as a broad market filter to identify products with overlapping supply and demand, followed by EG to narrow the selection to those where Slovakia enjoys competitive advantage and Ukraine demonstrates above-average import intensity. This approach mitigates the limitations of gravity models in conflict-affected economies, as highlighted by Ravishankar and Stack (2014) and Kabir and Salim (2011).

While gravity models are widely used for estimating trade potential, they rely on assumptions of stable macroeconomic conditions, reliable GDP data, predictable institutional quality, and consistent infrastructure — conditions systematically absent in wartime Ukraine, where official statistics are incomplete, GDP has contracted sharply and unevenly across regions, and logistics corridors are disrupted. In such volatile settings, TP and EG are better suited because they work directly with observed trade flows and product-level supply-demand overlaps, without requiring structural stability as a modelling precondition (Helmers and Pasteels, 2006; Ravishankar and Stack, 2014).

Regarding the time dimension, the study deliberately employs a 2014–2023 average rather than a single-year snapshot. This design choice mitigates the distortions caused by wartime trade shocks in 2022–2023 and provides a more stable baseline of Slovakia's comparative advantage and Ukraine's import intensity patterns. The averaging approach is consistent with the methodological recommendations of Bano et al., (2013) and Bronček (2019), who similarly apply multi-year averages of RCA and IS to reduce year-specific noise. While this implies a degree of structural stasis in the underlying indicators, it is a deliberate methodological trade-off that enhances robustness rather than an analytical limitation.

3 RESULTS AND DISCUSSION

The TP analysis reveals several high-potential sectors where Slovak supply capacity meets substantial Ukrainian demand but where actual trade remains below the estimated market opportunity. Table 1 presents the top HS-6 categories ranked by untapped remaining potential.

Tab. 1 Top HS-6 products by untapped TP for Slovakia in the Ukrainian market, 2023

HS-6 Code	Commodity description	Total TP (USD m)	Slovak exports to Ukraine (USD m)	Untapped remaining potential (USD m)	Annual export growth 2019–2023 (%)	Tariff (%)
8703XX	Motor vehicles (<10 seats, excl. public transport)	456	136	320	-11	7
852872	Reception apparatus for TV/radio	42	29	13	8	5
401120	New pneumatic tyres, of rubber	16	9.5	6.6	4	5
854449	Electric conductors, ≤1,000 V, not fitted with connectors	10	1.0	9.0	7	3
870880	Suspension systems and parts (incl. shock absorbers)	10	0.46	9.54	48	4
330610	Toothpastes and dentifrices	8.9	2.3	6.5	5	0
854442	Electric conductors, ≤1,000 V, fitted with connectors	8.7	1.3	7.4	10	3
961900	Sanitary towels and tampons, napkins, liners for babies	8.8	6.3	2.5	31	4

Source: Author's calculations based on ITC Trade Map, 2024

The largest untapped potential is observed in passenger motor vehicles (HS 8703XX), with an estimated USD 320 million in unrealized trade despite Slovakia's substantial automotive export capacity. High potential also exists in vehicle suspension systems and electrical components (HS 854449 and HS 854442), reflecting strong Ukrainian demand for transport and energy-related equipment. Consumer products such as toothpaste (HS 330610) and sanitary products (HS 961900), while smaller in absolute potential, demonstrate relatively high growth rates, suggesting expanding market niches.

From a demand perspective, most high-TP products belong to sectors likely to benefit from Ukraine's post-war recovery, especially in transport infrastructure, vehicle fleet renewal, and energy network modernization. These findings provide the baseline for the subsequent EG analysis, which will assess Slovakia's competitiveness in these categories and determine which opportunities are most feasible to capture in the near term.

Building on the TP results, the EG analysis refines the opportunity set by incorporating Revealed Comparative Advantage (RCA) and the Import Significance Index (IS). This step identifies products where Slovakia not only faces strong Ukrainian demand but also holds a clear competitive edge in the global market.

Tab. 2 Top HS-6 products by EG for Slovakia in the Ukrainian market, 2023

HS-6 Code	Commodity description	Slovak share in UA imports (%)	Slovak exports to UA (USD mil.)	RCA (SR)	IS (UA)	EG (USD mil.)	Annual export growth 2019–2023 (%)	Tariff (%)
870333	Motor vehicles >10 persons, diesel	0.012	5.31	13.91	3.90	431.4	-7	7
870350	Motor vehicles >10 persons, petrol	0.188	33.94	20.54	6.79	150.9	-6	7
961900	Sanitary towels/tampons, napkins	0.052	7.97	3.27	3.64	147.0	14	0
845011	Fully automatic washing machines	0.061	6.81	9.97	4.25	105.0	5	0
390910	Urea resins & thiourea resins	0.161	10.54	4.48	12.7	55.0	593	0
480256	Uncoated paper for graphic purposes	0.329	22.55	10.92	3.97	46.3	11	0
870710	Bodies (including cabs) for passenger motor vehicles	0.000	0.00	38.88	4.00	45.4	19	0
851610	Electric water heaters	0.002	0.07	2.09	4.08	42.2	-10	1

Source: Author's calculations based on ITC Trade Map, 2024

The automotive sector again dominates the EG ranking, with diesel and petrol passenger vehicles (HS 870333, 870350) showing unrealized potential exceeding USD 580 million combined. This is driven by Slovakia's very high RCA (>13) and strong Ukrainian import intensity (IS >3), yet current export volumes remain well below potential.

High EG values are also observed in consumer durables (washing machines), industrial chemicals (urea resins), and automotive parts (vehicle bodies). In the case of HS 870710 (bodies for passenger motor vehicles), the EG is significant despite zero recorded bilateral exports in 2023. This outcome is methodologically consistent: when ET = 0, the EG formula captures the full gap between Slovakia's competitive potential — reflected in an exceptionally high RCA of 38.88 — and Ukraine's observed import demand. Rather than representing a data anomaly, this result signals that the bilateral trade channel for this product has not been

activated, most plausibly due to sector-specific non-tariff barriers, the absence of distribution agreements, or a lack of active export promotion targeting this product category. This is further consistent with Bronček's (2019) observation that high-RCA products with zero bilateral trade flows often represent the highest-reward targets for focused trade promotion efforts precisely because the supply-side competitive advantage already exists.

Several of these high-EG products overlap with the high-TP list from Step 1 — notably automotive vehicles, sanitary products, and electrical equipment — making them priority targets for Slovak trade policy and private sector strategies. Conversely, some high-EG but lower-TP products (e.g., urea resins, uncoated paper) may require capacity-building or targeted marketing to unlock their potential.

To contextualize Slovakia's export potential to Ukraine, it is instructive to compare its opportunity profile with that of other EU Member States sharing a border or strong trade links with Ukraine, namely Poland, Hungary, and Romania. These countries face similar geographic, cultural, and logistical conditions but differ in industrial specialization and trade intensity.

According to ITC Trade Map (2023) data:

- Poland dominates the region's exports to Ukraine, with total exports of USD 11.2 billion in 2023. Its main high-potential sectors include agri-food products, construction materials, and consumer durables, leveraging both scale and long-standing distribution networks in Ukraine. While Slovakia's automotive sector is competitive, Poland benefits from a more diversified export structure and a broader SME participation base.
- Hungary exported USD 2.9 billion to Ukraine in 2023, with strong positions in pharmaceuticals, energy products, and electrical equipment. Hungary's comparative advantage lies in capital-intensive, technology-oriented exports, whereas Slovakia's strengths are concentrated in high-value manufacturing and machinery.
- Romania recorded USD 4.7 billion in exports to Ukraine in 2023, largely driven by agriculture, fuels, and transport equipment. Its Black Sea port access allows for complementary logistics routes compared to Slovakia's overland transport corridors.

Slovakia's unique selling proposition in this context is a high concentration of competitive advantage in the automotive and machinery sectors, combined with proximity-based logistics through the D1 motorway, Košice rail hub, and cross-border connections at Uzhhorod. Unlike Poland and Romania, Slovakia's export basket is less diversified but more specialized, suggesting that policy efforts should focus on deepening market share in a limited number of sectors rather than broad product expansion.

3.1 Discussion

Historically, Ukraine's trade structure was heavily oriented toward markets in the Commonwealth of Independent States (CIS), with Russia serving as its dominant export and import partner until the mid-2010s. As noted by Shepotylo (2013), over 35% of Ukraine's exports in the early 2000s were directed to CIS countries, primarily in low-value-added categories such as metals, chemicals, and agricultural commodities (Shepotylo, 2013). This trade pattern, combined with divergent technical standards and regulatory regimes, limited incentives for EU firms to develop strong market positions in Ukraine. In many sectors, the absence of EU-aligned procurement rules and customs procedures created high transaction costs and market entry barriers for European exporters. The 2014 political realignment and the provisional application of the DCFTA marked a turning point, accelerating Ukraine's regulatory convergence with the EU and triggering a gradual reorientation of its trade flows westward. However, the inertia from decades of east-focused commerce meant that EU exporters remained cautious in expanding into the Ukrainian market. Many firms perceived

Ukraine as a secondary destination compared to more predictable and institutionally stable EU or EFTA markets, further delaying substantial engagement.

Despite geographical proximity, shared infrastructure corridors, and long-standing trade relations under the DCFTA, Slovakia has so far failed to fully exploit the opportunities offered by the Ukrainian market. While countries such as Poland, Lithuania, and even smaller economies like Latvia have rapidly increased their footprint in post-2022 Ukrainian procurement and tenders, Slovak participation has remained sporadic and largely confined to traditional export categories. Poland, for example, has secured multimillion-euro contracts for the supply of rail infrastructure components and rolling stock through the EU's Solidarity Lanes initiative, strengthening its role in Ukraine's transport modernisation. Lithuania has leveraged its energy technology sector to deliver modular transformer substations and grid components financed by the European Investment Bank and other donors, embedding its companies in Ukraine's critical energy recovery projects. These successes have not happened by chance, they result from coordinated government–industry strategies, aggressive promotion of local suppliers to donor agencies, and the use of export credit guarantees to mitigate risk.

By contrast, Slovakia's limited institutional promotion of the Ukrainian market, risk-averse financing structures that discourage entry into high-volatility environments, and absence of a unified strategic framework have left its firms underrepresented in high-growth, donor-funded sectors. This pattern aligns with the broader findings of Boyko et al. (2024), who document that sustained EU member state penetration of the Ukrainian market requires coordinated government–industry strategies rather than unilateral firm-level initiatives. Similarly, Akhvlediani and Movchan (2024) stress that despite tariff liberalisation under the DCFTA, realising bilateral trade potential requires active institutional facilitation — a precondition that Slovakia has so far underdelivered relative to its regional peers. This inertia has allowed competitors to establish early relationships with Ukrainian buyers, secure long-term contracts, and position themselves as preferred suppliers in reconstruction value chains. In the context of Ukraine's sustained import demand for machinery, construction materials, transport systems, and high-value consumer goods, Slovakia's current market share is disproportionately low relative to its industrial capabilities. Failing to act now risks locking Slovak firms out of post-war supply chains that will define Ukraine's integration into the EU single market. Conversely, decisive and coordinated action could transform Slovakia from a peripheral supplier into a central player in one of Europe's largest economic transformations in decades.

3.2 Practical Implications for Slovak Firms

A further competitive edge may be gained by aligning export offers with Ukraine's post-war reconstruction priorities. While Poland and Romania will also target infrastructure and consumer goods markets, Slovakia could specialize in vehicle fleet renewal, industrial machinery for reconstruction, and high-value-added electrical components. Coordinated strategies with other EU states, particularly in joint logistics corridors and customs facilitation measures, could further enhance market penetration.

The TP and EG results indicate that Slovakia's strongest opportunities in Ukraine lie in automotive products, industrial machinery, electrical equipment, and selected consumer goods. To capitalize on these opportunities, Slovak exporters should adopt tailored market entry strategies that account for Ukraine's post-war reconstruction context, institutional environment, and evolving demand structure.

First, research shows that in emerging or recovering economies, partnership-based entry modes (e.g., joint ventures, licensing, or strategic alliances) can mitigate risks and accelerate market penetration by leveraging local networks and distribution capabilities (Holtbrügge and Baron, 2013). For Slovak automotive and machinery producers, this could involve collaborations with Ukrainian assembly plants or logistics providers to shorten supply chains and adapt products to local specifications.

Second, timing and institutional adaptation are crucial. Studies emphasize that entering a post-conflict economy during early reconstruction phases offers significant first-mover advantages but requires navigating bureaucratic complexities and political uncertainty (Arnstorp, 2013). Slovak firms should therefore engage in policy dialogue via chambers of commerce and EU trade facilitation programs to influence regulatory reforms and secure favorable conditions.

Third, product positioning within ESG and green investment frameworks can enhance competitiveness. Ukraine's reconstruction agenda, partly funded by international donors, is expected to prioritize energy efficiency, low-emission transport, and circular economy practices (Zveryakov, 2023). Slovak exporters in automotive, electrical, and construction-related sectors should adapt offerings to meet these sustainability criteria, potentially unlocking access to donor-funded procurement projects.

Finally, practical strategies could include:

- Market entry via local distributors for fast-moving consumer goods (toothpaste, sanitary products) to quickly gain retail shelf space.
- Joint production ventures in transport and energy equipment to align with Ukraine's industrial localization policies.
- Custom-built logistics solutions, such as rail-truck intermodal corridors from Košice to Kyiv, to reduce transit time and cost.
- Donor-financed project participation through tenders managed by the European Investment Bank or World Bank, focusing on infrastructure and utility upgrades.
- By combining sectoral specialization with institution-sensitive entry strategies, Slovak firms can position themselves as reliable partners in Ukraine's economic renewal, gaining both commercial returns and strategic long-term presence.

The priority export sectors for Slovakia, strategically dovetail with Ukraine's green recovery objectives and broader ESG-aligned investment frameworks.

From an environmental perspective, the Platform for Action on the Green Recovery in Ukraine, launched jointly by the OECD, UNEP, UNECE, and the German Federal Environment Ministry, emphasizes the integration of EU environmental standards into Ukraine's reconstruction policies (URC International, 2024). This initiative signals demand for energy-efficient machinery, sustainable infrastructure components, and low-emission transport solutions—areas in which Slovak exporters are particularly strong.

On the financing and institutional side, the Ukraine Investment Framework under the EU's Ukraine Facility commits up to €50 billion in support between 2024 and 2027, explicitly requiring compliance with environmental and social criteria, green procurement, and alignment with Ukraine's National Energy and Climate Plan (European Commission, 2025b). Slovak firms that adapt their offerings to meet these sustainability-based requirements will be better positioned to access funds under this framework.

From a corporate governance and sustainable finance standpoint, efforts by Ukrainian financial regulators to embed ESG disclosure and risk management into banking and financial institutions reinforce the demand for green-compliant goods and services (OECD, 2025) This regulatory direction creates additional incentives for Slovak exporters in modern machinery, electrical equipment, and transport sectors to adopt ESG-aligned practices, enhancing their credibility and competitiveness in Ukrainian procurement tenders.

Aligning Slovak export sectors with ESG priorities can unlock preferential access to green financing, donor-led projects, and procurement contracts, while supporting Ukraine's sustainable, EU-aligned reconstruction.

3.3 Managerial Implications

The evidence suggests that Slovak firms can unlock Ukraine's market not by competing head-on in generic product categories, but by targeting reconstruction-critical niches where donor funding, policy incentives, and market shortages intersect. In addition to targeting high-potential export niches, companies should also consider establishing manufacturing or assembly operations directly in Ukraine. The country offers abundant casting resources, legacy industrial sites suitable for brownfield redevelopment, and a highly educated technical workforce, particularly in engineering and metallurgy. For example, in the automotive supply chain, rather than attempting to export complete vehicles into a highly competitive segment, Slovak producers could position themselves as Tier-1 suppliers for the replacement and upgrading of Ukraine's public transport fleet, using Ukrainian foundries and fabrication facilities for key chassis and drivetrain components. These could then be assembled locally with Ukrainian labor, thereby qualifying for domestic sourcing benefits while maintaining Slovak quality standards. Such a hybrid production model would not only reduce logistical costs but also strengthen local partnerships and increase eligibility for donor-funded procurement programs prioritizing local content.

In industrial chemicals, the high EG for urea resins suggests potential in supplying construction materials for prefabricated housing, which will be in high demand for displaced populations. A partnership model could involve supplying semi-finished resin components to Ukrainian processors under just-in-time contracts, reducing inventory risks while ensuring supply stability for reconstruction projects.

Consumer goods manufacturers can exploit the rapid recovery of Ukrainian urban retail by bypassing traditional intermediaries and contracting directly with major Ukrainian supermarket chains (e.g., Silpo, Novus) or e-commerce marketplaces such as Rozetka, leveraging their distribution networks to deliver high-turnover items like sanitary products within days, not weeks.

Logistics should be treated as a revenue-generating service, not just a cost center. Exporters of high-value industrial goods can embed logistics guarantees in their contracts, offering delivery to the customer's warehouse in Ukraine with all customs clearance handled. This approach, while operationally demanding, shifts the value proposition from "we sell products" to "we deliver operational continuity," which is a decisive advantage in a high-risk market.

3.4 Policy Recommendations

To transform identified opportunities into actual trade flows, policy intervention must be both sector-specific and execution-focused. First, the Slovak Ministry of Economy should launch a Ukraine Reconstruction Export Acceleration Program that pre-selects 20–30 Slovak firms in high-potential sectors (as identified in TP/EG) and provides them with a combination of: (1) subsidized participation in Ukrainian procurement fairs, (2) legal and tender-writing assistance for donor-funded projects, and (3) matchmaking with vetted Ukrainian partners.

Second, trade facilitation must address border bottlenecks. Slovakia, together with Ukraine, could pilot a "Green Lane for Reconstruction Cargo" at the Vyšné Nemecké–Uzhhorod crossing, using pre-clearance digital systems to reduce wait times from days to hours. Priority would be given to goods falling into reconstruction-related HS codes identified in this study.

Third, financing tools need to be calibrated for post-war risk profiles. The Export-Import Bank of Slovakia could issue sector-targeted export credit guarantees for contracts in Ukraine worth up to €5 million, with risk-sharing from the European Investment Bank. Such guarantees could specifically cover donor-funded projects, where the payment risk is low but operational risk is high.

Finally, Slovakia should use its EU Council representation to advocate for joint procurement frameworks for Ukraine's reconstruction. Under such frameworks, Slovak and other EU firms could bid collectively on large infrastructure tenders, with work packages allocated according to each country's industrial strengths. This approach would position Slovakia as a specialized, indispensable supplier within a broader EU-led reconstruction ecosystem.

CONCLUSION

This study identified a set of reconstruction-driven export opportunities for Slovakia in the Ukrainian market, pinpointing sectors where unrealized trade potential intersects with strong Slovak competitive advantage. By applying a combined trade potential and export gap framework, the analysis moves beyond generic product targeting and reveals specific niches, such as modular automotive components, energy-efficient industrial machinery, and construction-related chemicals, where Slovak firms can secure early-mover advantages in Ukraine's evolving post-war economy.

The findings carry direct strategic relevance: companies can enhance market entry success by coupling product specialization with embedded logistics services, localized assembly in Ukraine, and active participation in donor-funded tenders. At the policy level, coordinated government and EU support can amplify these commercial opportunities through targeted export promotion, streamlined border procedures, and risk-sharing financial instruments.

Future research should build on this work by integrating firm-level competitiveness data and non-tariff barrier analysis into the trade potential framework, providing an even sharper picture of the operational feasibility of market entry. Additionally, future research should examine the supply-side feasibility of the identified opportunities by incorporating industry capacity utilisation data and assessing the extent to which projected export growth would constitute genuine expansion versus geographical reallocation of existing Slovak output. There is also scope to model scenario-based forecasts that account for different post-war reconstruction trajectories, donor funding flows, and the potential impacts of Ukraine's EU accession process. Such research would not only refine the prioritization of sectors but also help firms and policymakers anticipate and adapt to the rapidly changing trade and investment landscape in Eastern Europe.

Several limitations of this study warrant acknowledgement. First, the TP/EG framework identifies export opportunities based on trade flow data and comparative advantage metrics but does not assess supply-side capacity constraints within Slovak industries. Whether Slovak firms can scale production or reorient existing capacity to meet the identified demand in Ukraine remains an empirical question that requires firm-level data beyond the scope of this analysis. Second, a related risk is that the identified export growth could, in part, represent geographical trade flow rerouting — Slovak firms redirecting existing exports from other markets toward Ukraine rather than generating net new output. While TP/EG analysis identifies sectors of global comparative advantage rather than capacity-constrained sectors, and thus mitigates but does not eliminate this concern, future research should incorporate supply-side production data to distinguish genuine export expansion from trade diversion. Third, the analysis is conducted at the HS-6 level using aggregated trade statistics, which may mask firm-level heterogeneity in competitiveness and market readiness.

In a region where reconstruction will reshape entire industries, Slovakia's ability to combine precision manufacturing with strategic market positioning could make it not just a supplier to Ukraine, but a co-architect of its economic renewal – a role that offers both commercial reward and long-term geopolitical significance.

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