

## EXPLOITING TRANSIT POTENTIAL IN UKRAINE. THE TRANSPORT CORRIDORS AND EU APPROXIMATION

Dr. Hamed A., Gasukha L.  
*Dornier Consulting GmbH*

Cross border transport is an increasing market segment that fosters economic growth. Different routes compete to attract the traffic to benefit from the associated growth along the transport corridors. This paper focuses on the use of TRACECA (TRANsport Corridor Europe Caucasus Asia) as a stimulant to unfold transit potential in Ukraine, particularly in multi-modal freight transport. It reveals advantages and weaknesses of the corridor segments and also looks at the competition with alternative routes.

With Focus on the Ukrainian Segment of the corridor, practical approach is proposed to remedy a trend of diminishing transit traffic and attempt to restore positive trend in the transit market for Ukraine, especially using Ukraine-EU transport cooperation.

The association agreement between Ukraine and the European Union can contribute significantly in paving the way of eliminating transit bottlenecks particularly the non-physical barriers and provide higher attraction for movements through Ukrainian transport corridors.

**Keywords:** Ukraine-EU Association Agreement, International Freight Transport, Freight Transit, TRACECA Corridor, Attractiveness index, Investment Forum, public-private partnership (PPP).

### **Formulation of the problem in General and its connection with scientific and practical tasks.**

Ukraine's advantageous geographical position makes it inevitable destination for transit of goods between Europe, Asia and Middle East. Through the territory of Ukraine goes a number of international transport corridors reaching a total length of over 5 thousand km. Today country's transportation infrastructure is made of 169.5 thousand km of highways, 21.7 thousand km of railways, 45 civil airports, 18 seaports and other transport facilities. Ukraine has one of the most extensive rail networks in Europe, which handles significant part of freight and passenger traffic. The external border of Ukraine is the longest among the European countries.

The transit position of Ukraine is one of the main attractive features of the national market of Ukraine for foreign investors and manufactures. The interstate transit through Ukrainian territory is a significant national resource, which currently is not fully used. During the last year some 119 m tons of freight in transit have been transported.

However, At today's level, the transit potential of Ukraine today is exploited at only by 50-60%. This is also marked by the weakening trend of Ukraine's transit flows, and this can cause significant damage both to the economy and the political interests.

### **Objectives of the article are:**

1. Ukraine-EU transport cooperation.
2. Trends in Ukraine freight transit.
3. Investigation of the underlying causes leading to reduction of transit flow of Ukraine.
4. Ukraine in TRACECA. Regional Context. Attractiveness of Transport corridor in Ukraine
5. Illustrate forecast for inbound and outbound traffic flows for 2020.
6. Explore options to restore the positive dynamics of the transit market in Ukraine.
7. Suggest pillars of the strategy for Ukrainian transit traffic.

**Statement of the basic material of research with full justification of scientific results.** Since 1998 the Ukraine – EU transport cooperation is being regulated by the Partnership and Cooperation Agreement (PCA) and is focused on restructuring, modernizing transport systems and networks in Ukraine, developing and ensuring compatibility of transportation systems with a view to achieving a more global transport system.

In particular, according to the PCA the cooperation includes:

- modernization of management and operations of road transport, railways, ports and airports;
- modernization and development of railways, waterways, roads, ports, airports and air navigation infrastructure including the modernization of major routs of common interest and the trans-European links for the above modes;
- promotion and development of multi-modal transport.

One of the major spheres of cooperation is adaptation of national legislation to the EU norms and standards, in particular through the accession to the transport international conventions. A significant contribution to the abovementioned sphere of cooperation as well as to the upgrading of Ukraine – EU

transport cooperation will be made as soon as the Ukraine – EU Association Agreement enters into force.

Ukraine and the EU cooperate closely under various programs. In this regard, the EC supports the Transport Corridor Europe-Caucasus Asia (TRACECA) within the framework of the multi-lateral agreement of the TRACECA countries.

However, since the economic crisis in 2008, as shown in (Table 1) the transport volumes through Ukraine have decreased. Despite improvements of the economy, the volumes have not been restored to the pre-crisis values. This has also affected the freight transport flow along the TRACECA corridor and particularly through Ukraine.

Table 1.

Cargo Transit in Ukraine, thousand tons [1].

	2007	2008	2009	2010	2011	2012	2013
<b>Rail</b>	99 882	93 348	44 835	44 512	48 670	40 940	32 983
<b>Road</b>	4 495	4 909	3 354	4 649	5 011	4 850	5 585
<b>Maritime</b>	2 694	3 487	1 899	3 660	3 912	1 638	1 519
<b>Inland</b>	37,4	74,7		-	-	7,58	2,16
<b>Aviation</b>	1,28	1,54	1,17	1,58	2,81	2,99	0,77
<b>Pipeline</b>	279 802	223 498	127 982	99 440	93 120	76 978	79 249
<b>Total</b>	386 912	325 317	178 071	152 263	150 715	124 417	119 339

Cargo transit trends through Ukraine (Figure 1) shows a slight post crisis rise followed by lower volumes in all modes, which continued in the following year.

Looking at the logistics sector in Ukraine using the World Bank's 2012 Logistics Performance Index (LPI); a continuous development of logistic sector can be observed. Ukraine ranks no. 66 in the list of countries improving from position 102 in the year 2010 and position 73 in 2007. Ukraine developed in all aspects of the LPI (customs, infrastructure, logistics competence and tracking & tracing) but deteriorated in International shipping, which is relevant for the transit cargo. Ukraine in this regard still far better than Russian Federation ranking 96 in the LPI list.

While Ukraine is developing its logistic sector, the transit flow is not following this trend. The reasons behind this could lie in the missing soft measures to boost recovery of transit market segment.

The slow recovery for Ukraine was affected also by determined transit policy of Russia to shift in-bound freight to Russian ports and improvements in the transit corridors through Russian territories. Also Ukrainian transport development did not show any vision with a long term transport strategy within a communicated policy. The table shows the trends in development of Cargo Transit through Ukraine based on the national bureau of statistics [1].

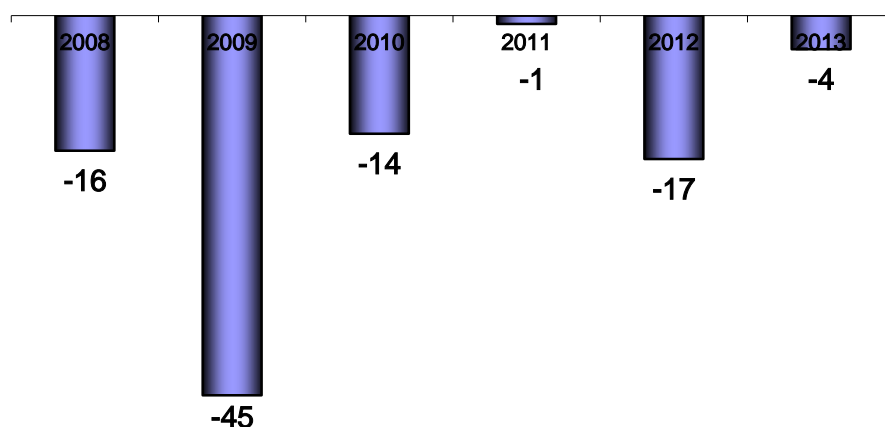


Figure 2: Cargo transit trends through Ukraine, % to previous year [1]

Thus, main problems of international transit of Ukraine could be among others:

1) National normative-legal base is incompatible with international transport law in matters of border crossings, the transport and cargo handling at terminals;

2) Absence of a unified state transit / transport development policy and clear strategy in Ukraine; On the 20th of October 2010, the Cabinet of Ministers of Ukraine adopted the "Transport Strategy of Ukraine for the period up to 2020" but this strategy was of mostly declarative nature

- 3) Quality transit is not sufficient: organizational and technical barriers at borders, poor service, low speed traffic, network conditions, terminals, rolling stock by technical parameters;
- 4) Losses (bulk) attributable to Russia's policy of directing more of its trade through its own ports.
- 5) Customs unions RUS / BY / KAZ simplifying transit movements within these countries as well as promoting trade among them and introduce higher resistance for flow through Ukraine.
- 6) Incompatibility with EU customs documentation standard (NCTS) add strong resistance to crossing Ukraine
- 7) Inadequate marketing of Ukrainian routes for cargo transit.
- 8) Practically non-existent system of control over delivery of goods.
- 9) Unreliability of criminal situation.
- 10) Imperfect system of control over delivery of goods.
- 11) Descriptiveness is insufficient.
- 12) Groundlessness of tariff policy.

Depending on its final destination; Europe east-bound freight traffic may use alternative corridors depending on routes' attractiveness for the particular commodity. Traffic between Europe on one side and Central Asia / West China on the other side may choose between the corridor through Belorussia - Russia or through Ukraine – Caucasus. The latter corridor is part of the TRANsport Corridor Europe Caucasus Asia (TRACECA).

With the independence of the new states in Central Asia, Caucasus and eastern Europe, the demand for cross border facilitation emerges to secure the supply of land locked countries. In 1993, the Brussels Declaration marked the starting point of TRANsport Corridor Europe Caucasus Asia (TRACECA). In September 1998, twelve countries Eastern Europe, Caucasus, and Central Asia signed the "Basic Multilateral Agreement on International Transport for Development of the Europe the Caucasus-Asia Corridor". The strategic focus was to develop corporation in multi-modal transport across the border of all member countries.

TRACECA corridor has two routes. One travels through Turkey and another route through Black Sea – Caucasus to the central Asian countries. Cargo has also the alternative to choose the route through Russia. Ukraine as the eastern entry of TRACECA plays a major role in defining the amount of flows that would utilize TRACECA corridor towards Caucasus.

The freight forecast model developed by TRACECA for the target year 2020 shows continuous decrease of the Transit traffic through Ukraine in roads and rail though at different rates. The map below shows the major routes for the traffic flow along TRACECA route and through Russian territories (Railroads).

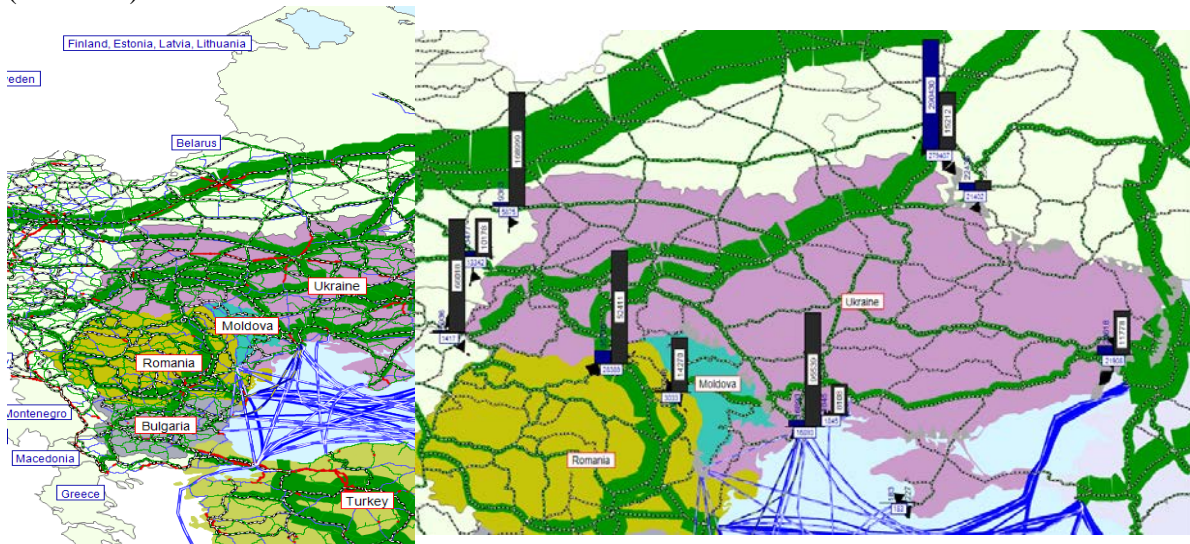


Figure 3: Freight transport demand forecast for target year 2020 (Railway)

When subtracting the domestic traffic, the (Figure 3) picture shows the share of rail transit going through Ukraine projected for the year 2020. The main flow avoids Ukraine and the Ukrainian ports play very limited role in the transit traffic. Traffic passing through Ukraine is mainly south-bound towards Romania and further to Turkey.

This limited role remains despite the predicted increase in the Odessa Region port traffic. Looking at the port cargo handling in Odessa region outbound traffic by the year 2020 based on TRACECA traffic



forecast model (table 2).

The increase is likely due to general increase in flow, but not due to increased market share. Figure 3. the share of rail transit going through Ukraine projected for the year 2020.

Table 2.

Forecast for inbound and outbound traffic forecast 2020 compared to base year 2008.

Country	Location	freight base year		forecasted traffic				Source of data
		2008	2020	2008	2020	out	in	
		outbound	inbound	outbound	inbound			
Ukraine	Yuzhny	7903	4951	9980	5265	26%	6%	model Run
Ukraine	ODESSA TOTAL	19894	11230	25213	11834	27%	5%	model Run
Georgia	Poti	7347	19009	8095	23657	10%	24%	model Run
Georgia	Batumi	4829	8928	5131	8558	6%	-4%	model Run
Azerbaijan	Baku	2746	3417	3446	4192	25%	23%	model Run

Improved attractiveness of TRACECA routes and appropriate marketing strategy can play vital role to help Ukraine to unfold transit potential when flows are optimizing for effective and safe routes for freight movements. At least in some market segments, Ukraine can gain substantial market share in the transit flow.

The Transport strategy should also consider the following pillars:

- 1) Increase attractiveness of corridor segments through Ukraine. This can only be pursued following identification of the attractiveness blockers.
- 2) Active pursuit of International Investors.

The attractiveness of a corridor is primarily: 1) Affected by the aspects of cargo safety; 2) Reliability and predictability of the time and costs; 3) Costs associated with the route; 4) Time needed for the route.

To improve the attractiveness, an investigation made in 2010/2012 by TRACECA technical Assistance project funded by the EU. This investigation was based on journals by drivers along the routes through Russia and Along both TRACECA routes, shown in the following Figure 4. This investigation aimed at identifying the attractiveness blockers and benchmark TRACECA route against its competition. Only when the blockers are identifies, improvements can be effectively targeted.

TRAX standing for Transport Route Attractiveness Index is calculated based on actual values obtained from drivers' journals. It is made to measure the attractiveness of a transport corridor in terms of its power to attract (multimodal) freight traffic. The routes are defined in nodes and stretches and the attractiveness is calculated based on the equations:

$$\text{Route Stretch's Index: } F(C_i * \alpha_c + TT_i * V_t * \alpha_t + R_i * \alpha_r + s_r * \alpha_s)$$

$$\text{and the Route Node's Index: } F(C_{ij} * \alpha_c + TT_{ij} * V_t * \alpha_t + R_{ij} * \alpha_r), \text{ whereas}$$

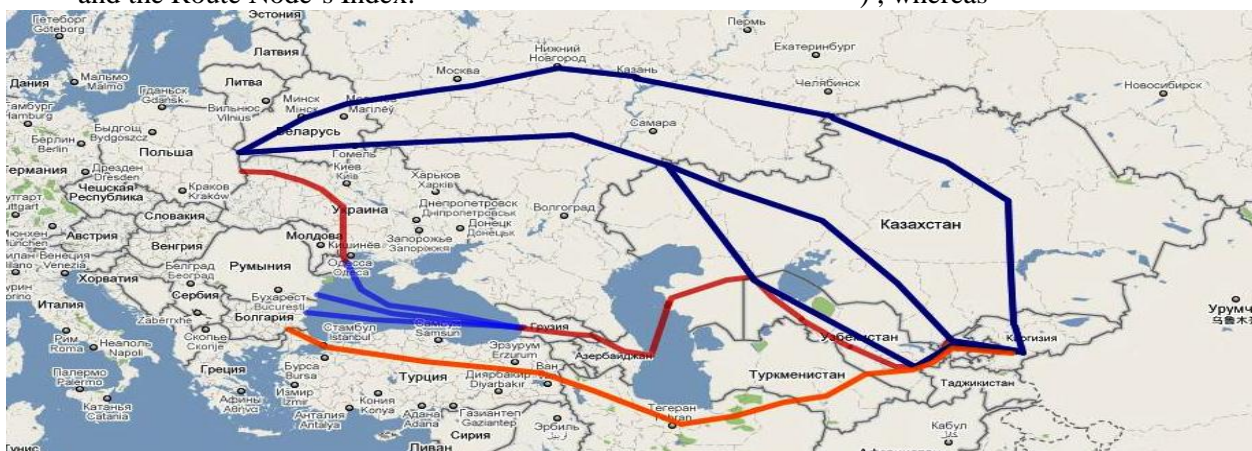


Figure 4: competing routes

$C_i$  Observed Transport Cost on Stretch  $i$   
 $\alpha_{c,t,r,s}$  Respective Weights of Costs/Transport Time / Transport Reliability/

$TT_i$	Transport Safety & Security Observed average Transport Time on Stretch i
$V_i$	Value-of-Time for cargo transport (“Opportunity Costs”)
$S_r$	Perceived Security and Safety of Cargo for specific Countries measured on a number scale

The weights were obtained through questionnaires to freight forwarders. The weights are shown in the table 3.

Table 3.

Factor / Weight	Weights of Criteria	
	STRETCHES	NODES
COST	13%	22%
TIME	17%	29%
RELIABILITY	29%	49%
RISK	41%	-

The results of TRAX shows that the route through Ukraine and Caucasus has the highest index (resistance) and hence the lowest Attractiveness. Given the weighing of the criteria, the low attractiveness is mainly caused particularly by the lack of reliability of the route, in comparison with the competing routes (table 4). The main reason for this lies within nodes and less within stretches.

Table 4.

The results of TRAX					
Route	Index	Cost	Time	Reliability	Safety
TRANS-RUSSIA	3032	1255	6767	6373	72
TRANS-TURKEY	6358	1896	7776	8839	76
TRANS-CAUCASUS	8169	2994	11243	10849	146

A closer look at the component of Ukraine as the European West TRACECA part (Romania and Bulgaria were not considered for being EU member states) of the trans Caucasus route shows that the nodes (border crossing points including ports) in Ukraine are the source of highest resistance (table 5).

Table 5.

West TRACECA TRAX components	
Region	West TRACECA TRAX
TRAX total	2765
TRAX stretches	438
TRAX nodes	2327

Figure 5 illustrates that crossing time at west Ukraine borders and black sea port of Ilyichevsk port as examples, can have a variation of up to 44 hours. Significantly higher than the port in Romania / Bulgaria with values of 11 and 18 hours respectively.

Having identified the attractiveness blockers for Ukraine transit as the border crossing points and less the stretches; the Improvement Potential for Ukraine could be supported through the deployment of the following actions:

1) Improvement of borders crossing. This will enable reliable time planning of cargo movements. Ukraine has particularly a different customs declaration procedures and forms that are different from the NCTS applies in the European Union and also different than those applied in the Customs Union (Russia / Belorussia / Kazakhstan). Also countries like Georgia and Turkey adopted the NCTS standards, making Ukraine an island with its own standards with additional resistance for cargo flow.

2) Improvements of Security and Safety of Cargo. Safety is considered knock-out criteria for freight forwarders. The TRACECA program has road safety improvements component that helps TRACECA countries and Ukraine to improve the Safety of cargo towards European benchmark.

3) Counter-act illegal practices. Illegal payment along the routes and at nodes (border crossings and ports) lowers the reliability of routes and the cost of transport chain cannot be calculated and priced



Figure 5. Crossing time.

for the client. Countries like Turkey and Georgia have shown pioneer example of reducing corrupt practices to European level within reasonable period. Ukraine is recommended to follow this international best practice.

The above actions will need to be embedded within a national action plan, derived from a national strategy with political endorsement and supporting institutional framework.

In parallel with those actions, the market share can only be increased if operators and freight forwarders become aware of the improvement in the transit practices in Ukraine. For this a set of actions can be pursued:

Dialogue with international operators and carriers to obtain understanding on international traffic requirements. Foreign investment in Ukraine faces higher competition from unattractive legal environment lacking governance and transparency. Opening the market for foreign investment could secure additional flow of cargo through Ukraine.

4) Label Transit routes as TRACECA routes. This would provide attractive option to interact with the industry and enter dialogue with international operators but also increase the visibility of infrastructure and logistics investment through the periodic TRACECA International Investment Forum (2010 / 2012 / 2015).

5) Complimentary measures:

Further analysis of market / commodities segments to identify significant transit cargoes lost since 2007;

Create partnership with international transport operators to identify promising market segments for transit through Ukraine (if costs and transit times were reduced and reliability improved);

Continuous monitor of Ukraine's competitiveness for transit traffic.

6) One of the most important events that will help to increase traffic from Ukraine is that European Union eliminated customs duties on goods originating in Ukraine starting from April 23, 2014. This measure will allow for the EU's unilateral reduction or elimination of customs duties on goods originating in Ukraine. The step has been taken to support Ukraine's economy ahead of the official entry into force of the Association Agreement's provisions on a Deep and Comprehensive Free Trade Area (DCFTA), scheduled to be signed later this year.

### **Conclusions and Recommendation.**

In order to improve the transit potential of Ukraine should:

- Develop cross-border cooperation;
- · Adapt national regulatory framework in approximation with EU Acquis and international transport laws;
- · Enhance throughput and transitivity of territory;
- · Improve the tariff and price and tax policy on international transit, simplify customs procedures for transit of participants;
- · Continue modernization efforts of transport infrastructure and border crossing points across the state border in the technical aspects;
- · Improve control over delivery of goods;
- · Stimulate the attraction of additional transit cargo.

TRACECA corridor is competing with transport corridor going through Russia in the east west direction. In the recent years, large amount of Cargo has been flowing along routes away from Ukraine. Progressive measures based on understanding of the market characteristics could help restore the declining market share and possibly revert the negative trend. The actions required are mostly of low cost comprising mainly policy and regulatory measures.

Non-physical barriers and uncertainty are the easiest to improve without major investments by administrative reforms and will ultimately target:

- Predictability of time and costs at border crossing including land and maritime borders
- Overdue improvements of transit documentation to compatibility with European Standards

Ukraine has introduced a new Customs Code which the importers as well as the freight forwarding and customs' brokerage industry appreciate being more workable than the previous one. Still further alignment is needed for example the implementation of NCTS documentation system

The other factors needed are consistent transport policy and action planning to align the transport investments in Ukraine with the overall national strategy.

Ukraine and the EU agreed that the appropriate trade and customs should be stable and comprehensive and proportionate, transparent and contemplated vigils , non-discriminatory , impartial and applied equally and efficiently. Ukraine also has made a commitment to gradually approaching

according to the specified schedule and list of EU legal acts, their customs legislation to the EU acquis.

The parties also considered the relevant provisions on cooperation to technical assistance for capacity building and facilitating Reforms in this area.

According to the Association Agreement, Ukraine must take steps to progressively achieve compliance with EU technical regulations, procedures, European standardization, metrology, accreditation and conformity assessment system and market surveillance and implement the principles and practices embodied in the relevant regulations and EU directives.

For improving efficiency of transit potential Ukraine should also to develop a public-private partnership (PPP). Public-private partnership is the scheme of cooperation between the State and business designed for infrastructure. sector. The transport sector is a priority target for PPP projects in the region, and is likely to remain so for the foreseeable future, particularly in terms of deal value.

While understanding that Ukraine may still have a chance to stop the loss of transit traffic and claim a role in transit shares improving its ports utilisation; the concerns remains valid, if Ukraine is determined to do the necessary steps.

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**Др. Хамед А., Гасуха Л. Використання транзитного потенціалу України. Транспортні коридори та наближення до ЄС.** Міжнародні перевезення є зростаючим сегментом ринку, що сприяє економічному зростанню. Різні маршрути конкурують за залучення трафіку уздовж транспортних коридорів та отримання пов'язаної з цим вигоди. Ця стаття зосереджена на аналізі використання ТРАСЕКА (транспортний коридор Європа - Кавказ- Азія ) як стимулятора зростаючого транзитного потенціалу України, зокрема вантажного мультимодального транспорту. Показано переваги і слабкі сторони сегментів коридору, а також рівень конкуренції з альтернативними маршрутами.

З акцентом на український сегмент коридору, практичний підхід пропонує виправити тенденцію до зменшення транзитних перевезень і спробувати відновити позитивну динаміку транзитного ринку для України, особливо з використанням транспортного співробітництва між Україною та ЄС.

Угода про асоціацію Україна-Європейський Союз може зробити істотний внесок у прокладання шляхів ліквідації транзитних вузьких місць, особливо нефізичних бар'єрів і забезпечуватиме більшу привабливість потоків через українські транспортні коридори.

**Ключові слова:** Угода про асоціацію Україна-ЄС, міжнародні автоперевезення, транзит вантажів, коридор ТРАСЕКА, привабливість індексу, Інвестиційний Форум, державно-приватне партнерство.

**Др. Хамед А., Гасуха Л. Использование транзитного потенциала Украины. Транспортные коридоры и приближение к ЕС.** Международные перевозки являются возрастающим сегментом рынка, что способствует экономическому росту. Различные маршруты конкурируют за привлечение трафика вдоль транспортных коридоров и получения связанной с этим выгоды. Эта статья сосредоточена на анализе использования ТРАСЕКА (транспортный коридор Европа-Кавказ-Азия) как стимулятора возрастающего транзитного потенциала Украины, в частности грузового мультимодального транспорта. Показаны преимущества и слабые стороны сегментов коридора, а также уровень конкуренции с альтернативными маршрутами.

С упором на украинский сегмент коридора, практический подход предлагает исправить тенденцию уменьшения транзитных перевозок и попытаться восстановить положительную динамику в транзитном рынке для Украины, особенно с использованием транспортного сотрудничества между Украиной и ЕС.

Соглашение об ассоциации Украина-ЕС может внести существенный вклад в налаживании путей ликвидации транзитных узких мест, особенно нефизических барьеров и обеспечит большую привлекательность потоков через украинские транспортные коридоры.

**Ключевые слова:** Соглашение об ассоциации Украина-ЕС, международные автоперевозки, транзит грузов, коридор ТРАСЕКА, привлекательность индекса, Инвестиционный Форум, государственно-частное партнерство.

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