УДК 339.168.6
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# MARKETING OF TRANSPORT CORRIDORS. A SYSTEMATIC APPROACH TO INCREASE MARKET SHARE IN TRANSIT TRAFFIC

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 marketing 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 marketing approach is proposed to remedy a trend of diminishing transit traffic and attempt to restore positive trend in the transit market for Ukraine

**Keywords:** International Freight Transport, Freight Transit, Marketing Strategy, marketing instruments, TRACECA Corridor, Attractiveness index, investment forum.

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# МАРКЕТИНГ ТРАНСПОРТНИХ КОРИДОРІВ. СИСТЕМНИЙ ПІДХІД ДО ЗБІЛЬШЕННЯ ЧАСТКИ РИНКУ ТРАНЗИТНИХ ПЕРЕВЕЗЕНЬ

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 маркетингового стимулятора зростаючого транзитного потенціалу Україні, зокрема вантажного мультимодального транспорту. Показано переваги і слабкі сторони сегментів коридору, а також рівень конкуренції з альтернативними маршрутами.

З акцентом на український сегмент коридору, маркетинговий підхід пропонує виправити тенденцію до зменшення транзитних перевезень і спробувати відновити позитивну динаміку транзитного ринку для України.

**Ключові слова:** міжнародні автоперевезення, транзит вантажів, маркетингова стратегія, маркетингові інструменти, коридор ТРАСЕКА, привабливість індексу, інвестиційний форум.

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# МАРКЕТИНГ ТРАНСПОРТНЫХ КОРИДОРОВ. СИСТЕМНЫЙ ПОДХОД К УВЕЛИЧЕНИЮ ДОЛИ РЫНКА ТРАНЗИТНЫХ ПЕРЕВОЗОК

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 маркетингового 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, маркетинговый подход предлагает исправить тенденцию уменьшения транзитных перевозок и попытаться восстановить положительную динамику в

транзитном рынке для Украины.

**Ключевые слова:** международные автоперевозки, транзит грузов, маркетинговая стратегия, маркетинговые инструменты, коридор ТРАСЕКА, привлекательность индекса, инвестиционный форум.

**Formulation of the problem in General and its connection with scientific and practical tasks.** Ukraine has strong transit potential. Multimodal transit could play a significant role in the processes of globalization and transformation of the economy, because Ukraine is a geopolitical bridge in the transport links that are formed on the main trends of international trade between Europe and Asia, Northern Europe, Middle East. 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.

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. Investigate the underlying causes leading to reduction of transit flow of Ukraine.
2. Bench mark of attractiveness of the TRACECA transport corridor within Ukraine.
3. Illustrate forecast for inbound and outbound traffic flows for 2020.
4. Explore options to restore the positive dynamics of the transit market in Ukraine.
5. Suggest pillars of the Marketing strategy for Ukrainian transit traffic.

**Statement of the basic material of research with full justification of scientific results.**

Freight transport is not always an advantageous growth factor due to its external costs. Policy instruments that steers the development of freight transport vary from country to country. Core Freight Transport network and multi-modal transit corridor seem to offer logistics viable option and framework to bundle transit at desired routes and modes. This would benefit the economic development and likely helps to confine external costs, particularly in countries with lower economic growth.

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.

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.

Table 1

Cargo Transit in Ukraine, thousand tons

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|
| **Rail** | 99 882 | 93 348 | 44 835 | 44 512 | 48 670 | 40 940 | 33 172 |
| **Road** | 4 495 | 4 909 | 3 354 | 4 649 | 5 011 | 4 850 | 4 689 |
| **Maritime** | 2 694 | 3 487 | 1 899 | 3 660 | 3 912 | 1 638 | 1 639 |
| **Inland** | 37,4 | 74,7 | | - | - | 7,58 | |
| **Aviation** | 1,28 | 1,54 | 1,17 | 1,58 | 2,81 | 2,99 | 1 |
| **Pipeline** | 279 802 | 223 498 | 127 982 | 99 440 | 93 120 | 76 978 | 75 733 |
| **Total** | 386 912 | 325 317 | 178 071 | 152 263 | 150 715 | 124 417 | 115 233 |

Source [1]

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].

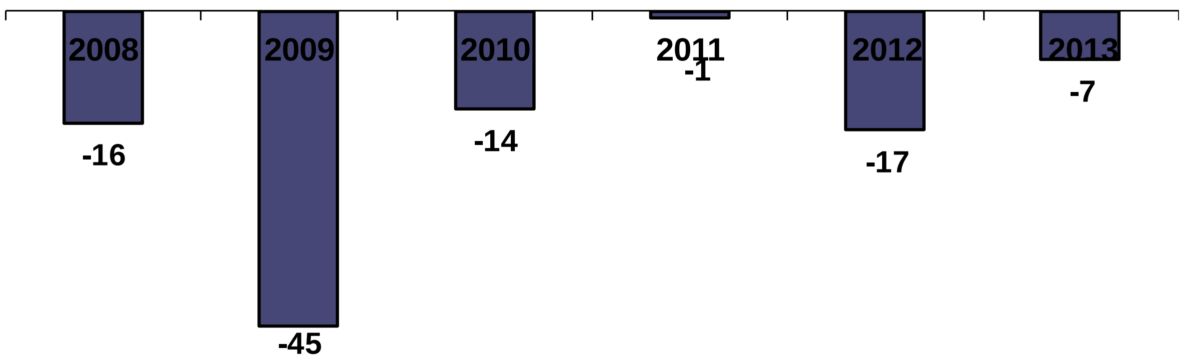


Figure 2: Cargo transit trends through Ukraine, % to previous year

Source [1]

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

1) Ukrainian legislation (for border crossing) is incompatible in many issues with law Western European countries;

2) Absence of a unified state transit / transport development policy and clear strategy in Ukraine;

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.

Depending on its final destination; the European east bound freight traffic may use alternative corridors depending on their attractiveness for the particular commodity. Traffic between Europe on one side and Central Asia / West China for example 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).

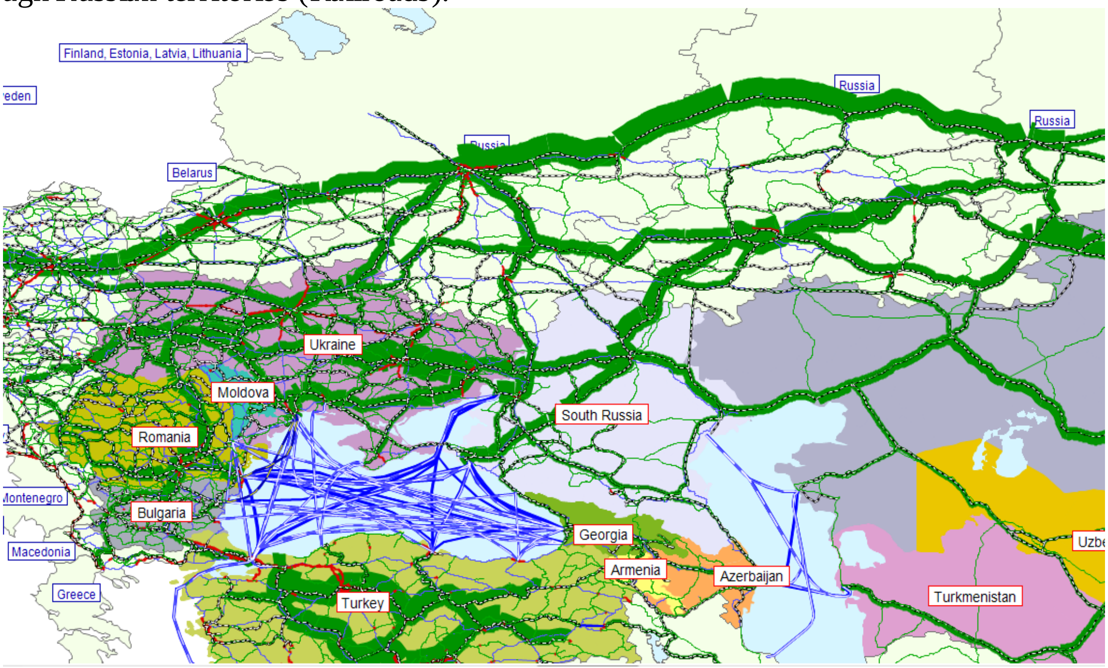


*Figure 3: Freight transport demand forecast for target year 2020 (Railway)*

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.

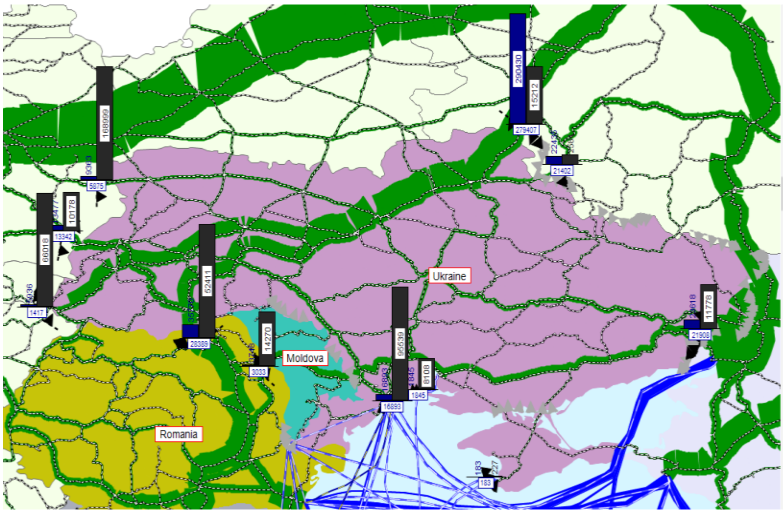


*Figure 3. the share of rail transit going through Ukraine projected for the year 2020*

Table 2

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

| Country | Location | freight base year 2008 | | forecasted traffic 2020 | | | | Source of data |
|---|---|---|---|---|---|---|---|---|
| | | outbound | inbound | outbound | inbound | out | in | |
| 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 Marketing strategy shall be based on 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 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.


*Figure 4: competing routes*

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:

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

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

| | |
|---|---|
| $C_i$ | Observed Transport Cost on Stretch i |
| $\alpha_{c,t,r,s}$ | Respective Weights of Costs/Transport Time / Transport Reliability/ Transport Safety & Security |
| $TT_i$ | Observed average Transport Time on Stretch i |
| $V_t$ | 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 weighs are shown in the table 3.

Table 3

Weights of Criteria

| *Factor / Weight* | 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).

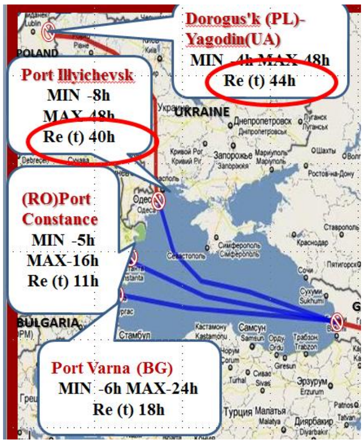


Figure 5: crossing time

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 to 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 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 domestic investors. (how much is foreign investment in roads transport sector). 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.

**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.

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.

**References:**


1. Internet resource: http://www.ukrstat.gov.ua/operativ/operativ2013/tz/tranz/tranz_u/tranz0213_u.htm
2. TRACECA IGC Strategy
3. Seeto, South East Europe Core regional Network Development Plan. Five year Multi Annual Plan, December 2009
4. Cees J. Ruijgrok, Lori A. Tavasszy. The Development of International Freight Transport in Europe as a Result of Developments in International Trade and Logistics.
5. TRACECA LOGMOS report, 2013
6. World bank Logistics performance index, 2012
7. Dr. Hamed IDEA PROJECT Working Paper
8. Becker, G.S. (1965) A theory of the allocation of time, in: Economic Journal, Vol. 75 (3), Pages 493-517