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Problems of transport systems serving for Europe-Middle East trades within the framework of EU transport policy and solution proposals

AB Ulaştırma Politikaları Çerçevesinde Avrupa-Ortadoğu Ulaştırma Hatlarında Ulaştırma Sistemlerinin Sorunları ve Çözüm Önerileri

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Abstarct

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Investment and operational standards should be justified in such a way that loss of waiting time and cost increase due to insufficient capacity of sub-transport modes as well as the sum of loss and cost of idle time be minimum or economical.

Development and expansion of transport sector and transport modes in Turkey should be taken up and organized in conjunction with socio-economic, macro-economic approaches and ongoing foreign trade relations.

Hence, utmost importance and priority is given to productivity of the basic production systems and foreign trade relations as the productivity of the

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transport sector and systems are primarily dependent upon the other basic and production systems.

It is also relevant to stress further that the attention is paid to means and facilities in the field of transport, production and foreign trade of neighbouring countries, Balkan countries, as well as the states of Caucasus, Black Sea, Middle East, Middle Asia and European Community. It is of utmost importance to inaugurate (liner) combined transport services between Turkish and the Black Sea ports within the TRACECA framework.

Such an economic activity will certainly necessitate the harmonization and renewal of merchant fleet.

Projects to improve and better up reliable and sustainable macroeconomic and trade relations with the countries of the Middle Asia and Middle East regions, and the Black Sea Rim and matching with the macroeconomic structure of Turkey will likely grant a possibility to attract further attention and strengthen relations with the EU.

Those countries should pay attention to eliminate bottlenecks and insufficiencies built up due to insufficient capacity of current passenger and cargo transport routes.

Keywords: EU, transport, Policy, planning, demand, transport systems

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Introduction

Process of the Turkish integration with the EU from the marketing angle have necessitated verification of the research studies with regard to development of transport infrastructures and management organisations for economical transport links and lines as well as the relevant organizations between Turkey,the EU and the Middle East countries.6th Framework programme in this regards specifies the harmonisation of the strategic plans and transport policies (Koldemir, Özen and Bayar 2005).

The harmonisation setup aims the planning of demand and hence infrastructure requirements taking the traffic volume,time factor,value,transport distance and period,waiting time within terminals and depots,loading and unloading cycles into consideration based on the definition given for costs functions of the transport systems.

Policies of the transport sector may be clarified by way of planning objectives and principles, sectoral physical conditions and

means,analytıcal and deterministical solutions to transport problems. Studies for policy clarification may be taken by way of evaluation in terms of research steps as well as system approach with regard to long-term macro scales (Koldemir, 2004).

On the other hand, general transport policies,demand and supply equilibrium of transport systems and the transport industry in generalshould well be defined in comparison with the EU general transport policy as well as the transport policies of the neighbouring countries of Turkey. EU transport policy based on main lines and precautionary steps has been significant with mainly regard to following issues;

- To reduce waiting time and congestion down to a reasonable values,
- Studies based on social,physcological and econical reasons of traffic diversification to road transport and relevant steps how to avoid
- Shifting of passenger and cargo demand to rail and sea
- Steps and policies needed to halt environmental pollution
- Steps for better and efficient land usage
- Steps to possibly to halt or minimise accidents and losses

Transport in EU and Turkey

European Union is in need of road, rail, air and waterborne transport modes, to be serving as efficiently, well integrated and complement one another in order to ensure seamless transport routes.

As has been so considered by the Union experts, infrastructures are the backbone of the European transport systems. While the existing networks to be used as efficiently as possible with the help of new technologies to better up the Unionwide networks, newcomers inclusive, energy efficiency, alternative fuels and new technologies that improve the efficiency of all transport modes in order to contribute to European energy security will be encouraged.

EU Countries have developed projects to set up an integrated transport network to link Union Countries and to cover the Trans-Europe. With this regard they have considered to reveal criteria to harmonize the progress on equal steps and avoid unequal development as well as

pollution, congestion with due regard to minimise accident occurring. In this connection Turkey has to review and organise its policies and investments planning accordingly, i.e, to match with the EU policies. Hence, at this stage, it deems necessary to study the current EU and Turkish transport systems.

EU Transport Industry

The European Union's transport policy has developed over the past almost 20 years.However through the White Paper of 2001 and the current mid-term review, the objectives of the policy is outlined as hereunder (EC 2001b):

- A High level of mobility,
- Protection of the environment;
- The pursuit of energy security,
- Guaranteed minimum labour standards fort he sector,
- Protection of passengers and citizens,
- Supporting new technologies and promoting the efficiency,
- Sustainability of the growing transport sector

EU has had a contemporary and growing transport industry in the fields of rail, road and air transports, linking primarily the large cities and metropolitan areas of the Union with those transport modes. It is evident that the European transport networks have contemporarily been developed in the North Easterly and South Westerly axis of the continent. Further, more than 10 different rail and underground lines extend radially out of the centrum of the large North European cities. Similarly, there exist parallel rail lines all along the shores of the riparian Southern European Countries by the MedSea.

Turkish National Development Plan for 2004-2006 periods indicates that European Union reveals cargo transport as 44 p.c by road, 41 p.c by shipping, 8 p.c by rail and 4 p.c by inland waterways and river transport. Share of the road transport for passengers' is79 p.c whereas the rail is just 6 p.c(DPT 2003).

Table 1 shows the length of railways and highways on the basis of square kilometre in Turkey and some European Countries. In this

Table, the average highway length is indicated as 1.77 km/sq.km for EU, 1.02 km/km.sq for candidate Countries and 0.5 km/sq.km for Turkey. Similarly, the average railway length is indicated as 0.0548 km/sq.km for EU, 0.0707 km/km.sq for candidate Countries and 0.0112 km/sq.km for Turkey. In other words, infrastructure for road transport is 3.54 times, for rail transport is 5 times higher than that of Turkey(DPT 2004).

Table 1. Transport indicators of EU and Candidate Countries

	Road	Rail	Air
	(km per km^2)	(km per km^2)	(000passengers)
	2000	2001	2001
Belgium	4,86	0,1114	8489
Denmark	1,65	0,0476	6382
Germany	1,77	0,101	57334
Greece	0,89	0,018	7303
Spain	1,31	0,0275	41470
France	1,62	0,0533	50817
Ireland	1,32	0,0274	16374
Italy	1,,59	0,0543	31031
Luxembourg	2,01	0,106	886
Holland	4	0,0676	20474
Austria	2,4	0,0688	6514
Portugal	0,77	0,0306	6651
Finland	0,23	0,0173	6698
Sweeden	0,52	0,0244	13123
England	1,62	0,0669	72772
AB- 15	1,77	0,0548	23088
Poland	1,17	0,0643	2670
Hungary	0,33	0,0855	2075
Estonia	1,12	0,0214	278
Slovenia	1	0,0585	690
Czech Republic	1,62	0,1195	2560
Slovakia	0,87	0,0747	43
Appl. Country Ave.	1,02	0,0707	1386
Turkey	0,5	0,0112	9905

“Enlargement has provided the Union with a continental dimension and now the Union is more diverse. Whereas pollution, land use and congestion are the major concerns in the densely populated and industrialised “midwest”, accessibility remains a key concern in other regions. Consequently, certain policy areas require more differentiated solutions, leaving room for national, regional or local solutions while ensuring a Europe-wide transport market.”(EC 2006c)

Transport White Paper for 2001 considers the following basic principles for a sustainable transport policy(EC 2001b):

- Revitalising the railways,
- Increasing the road transport quality,
- Promoting transport by shipping and inland waterways,
- Improvement of the integrated transport modes,
- To set up a balance in between the environment and air transport increase,
- Structuring the "Trans-European Transport Network (TEN) ",
- Enhancing security in road transport,
- Adoption of policies with regard to effectively pricing of transport services
- Adoption of rights and responsibilities of users,
- Providing high quality intra-city transport services,
- Providing best and convenient technology for clean and effective transport services
- To manage the effects of transport globalisation,
- Improving the mid and long-term strategies for a sustainable transport,
- Improving combined transport in order to integrate various transport modes of different characters,

Mobility and innovation have been the prime aim fort he European Commission (EC) and the EC has accordingly prepared the following studies in this regard(EC 2006d):

Mobility:
• **Road transport:** internal market review (2006), review of legislation on working conditions (2007)
• **Rail transport:** remove technical barriers to interoperability (2006), promote rail freight corridors (2006), rail market monitoring (2007)
• **Aviation:** review air transport liberalisation measures (2006), complete Single European Sky (2007), SESAR (2007); emissions policy **Innovation:**
• **Waterborne transport:** Common European Maritime Area White Paper (2008), European ports policy (2007), deploy e-maritime systems (2009), promote inland waterways transport
• **Infrastructure:** smart charging (2008), identify the multi-annual investment programme up to 2013 for the Trans-European Networks (2007)"
• Freight transport logistics strategy & broad debate on possible EU action (2006), definition of action plan for logistics (2007)

• Galileo: identification of possible future applications (2006), start of concession in 2009
• Launch of major programme to bring intelligent road transport systems to the market (2008)
• Implementation of ERTMS in certain corridors in 2009
• Launch first call of the 7th RTD Framework Programme (2007)
• RTD and support to dissemination, exploitation and market penetration of new technologies

Those policies and strategies, mobility inclusive, still have been on the EU's agenda.Under the current strategies and policies of the Union TEN-T and TRACECA Projects are studied which are closely linked with the Turkish interests on the basis of facilitation of Turkey to Central Asia transport services.

Leading joint Transport Corridor: TRACECA

EU is very keen on improving traditional East-West trade and in this regard organised the contemporary Silk Road (TRACECA) Project.Turkey has also got common interest on this Project and accordingly participated almost in all activities.

The traditional East-West trade corridor is known as the "Silk Road". Silk Road is one of the World's oldest and historically most important trade routes and is the longest land bridge of the time. Its influences on the culture of China, Central Asia and the West were prominent for many centuries. It was a long lasting trade bridge linking East to West and vice versa.

The continental Silk Road diverged into south and north routes extending from the commercial centres of North China and reaching to various places in the Black Sea, Mediterranean Sea and to Mesopotamia. The south route linked China to Mesopotamia and Anatolia through Turkistan and Iran, ultimately reaching to the Mediterranean coast of Anatolia, Syria or Egypt; the north route however linked China to the Black Sea and Balkans, leading to Venice via the Black Sea and Sea of Marmara. (Akten and Göneçgil, 2004)

The Silk Road (or, route) was actually a network of several transport links, having more than 15.000 km in length, connecting China to the West via several distribution centres and crossing Central Asia by way of land bridge. It was not a single straight thoroughfare, and was actually several caravan routes - Kashgar being the most important point of convergence of this very long transport corridor.

Apart from the land connections, the old Silk Road also used sea routes linking Europe to Asia Minor, through the adjacent seas Black Sea, Aegean Sea and the East Mediterranean. In the Black Sea, the road from the north passed over Batumi to Trabzon and/or Sinop, Istanbul, Bursa, Gallipoli and reached Venice; and in the Mediterranean, it extended from Syria to Antakya, Antalya (East Mediterranean) Izmir, Foca (Aegean Sea) and from there to Europe.

The Silk Road acted as Central Asia's main trade artery for many centuries. Over the years, profitable and safer shipping routes rather than overland also flourished connecting China to the Middle East; hence trade via shipping routes expanded to such an extent that eventually the land bridge died down.

The Silk Road served as the main transport link between the two Continents for more than 1000 years and lost its importance in times when the security of transit no longer existed. Most of the east-west trade hence shifted to shipping transport through the Suez Canal and Malacca Straits. Safer transport of goods and service reliability also prompted this move towards shipping. It remained however an important and fascinating cultural resource for many centuries and yet it still bears its marks.

As the years went by, shipping trade has been dominant in the Far East trade- as is today. At present, most trade between Europe and Far East uses the maritime route via Suez Canal and through the Malacca Straits(Akten and Göneçgil, 2004). The journey by sea from Lianyungang to Rotterdam is about 19900 km, whereas the land route is 10900 km. Hence, the rail transport is about half the distance of the shipping route. Transport of containers by rail from Lianyungang to Rotterdam takes more than 30 days and it is 25 days for shipping.

The political and economic maps of Europe and Asia have to a large extent changed in recent years. With the collapse of the USSR in 1991, after the Turkish Republics in Central Asia acquired their independence in particular, the idea both to revive the traditional Silk Road both as a contemporary trade route and as a cultural and historical heirloom gained momentum. TRACECA (**TRA**nsport **C**orridor **E**urope-**C**aucasus-**A**sia) is such a project to connect Europe to Central Asia.

During the 2nd Euro-Asian Transport Conference held in St. Petersburg in 2000 four main Eurasian transport corridors linking the two Continents were adopted:

- TRANSSIB,
- NORTH-SOUTH,
- European and Asian Road Networks,
- TRACECA,

Two of the transport corridors, so-called TRANSSIB and NORTH-SOUTH pass all the way through the Russian Federation territory. TRANSSIB is a full railway link extending from Moscow to Vladivostock in the Far East. The Corridor has several branches such as China to Kazakhstan, Mongolia to China, China and Korean peninsula. TRANSSIB presently links the Pacific Ocean to the Baltic and Black Sea extending further to West Europe up until the North Sea. Today volume of cargo carried through TRANSSIB corridor is about 40 to 60 millions tons per annum. Totally 89.000 TEU containers used TRANSSIB corridor in the year 2001- more than half were being empty containers. TRANSSIB corridor which is more than 10.000 kilometres by rail takes less than 10 days to carry containers from the Pacific Ocean coast (Nakhodka) to Finnish border – with an average travel of 1040 kilometres a day.

NORTH-SOUTH Eurasian transport corridor connects North and Northwest Europe with Caucasus, Central Asia, Persian Gulf and Indian sub-continent. Corridor starts at the Russian-Finnish border and through St. Petersburg and Moscow reaches to Caspian seaports and by way of rail links to Persian Gulf and Indian Ocean. It is an alternative to traditional shipping route via Suez Canal.

The TRACECA Project /Programme was launched at a Conference in Brussels in May 1993.Trade and Transport Ministers of eight TRACECA countries (five Central Asian republics and three Caucasian republics) got together and agreed there to implement a programme of EU funded technical assistance to develop a transport corridor on a west-east axis from Europe, across the Black Sea, through the Caucasus and the Caspian Sea to Central Asia(EC 2000a).

"TRACECA-Restoration of the historic Silk Route" Conference that was held on September 8, 1998 in Baku (Azerbaijan) was the most striking programme milestone as the work on the "Basic Multilateral Agreement on International Transport for the Development of the Transport Corridor Europe-Caucasus-Asia with its complementary Technical Annexes was concluded and signed.

The objective of the Basic Agreement and its Technical Annexes can be outlined as in the following:

• Assisting in the development of economic relations, trade and transport communication in Europe, Black Sea region, Caucasus, Caspian Sea region and Asia,

• Ensuring traffic security, cargo safety and environment protection,

• Ensuring access to the world market of road , rail transport and commercial navigation,

• Harmonisation of transport policy and legal structure in the field of transport,

• Creation of equal conditions of competition for transport operations.

Partner countries to the Programme consider that the TRACECA as a route is of strategic importance, by assuring them of an alternative transport link to Europe.

With the advent of new contemporary transport corridor rail transport is completely to replace caravans of ancient Silk Road, and no customs barrier will exist all the way through. Smooth and fast combined transport services will avail itself of every chance to foster the trade and other possible relations between Asia and Europe. It is planned a continuous railway to run from the Yellow Sea to Western Europe via the Black Sea. Black Sea is to be transited back and forth by means of several ferry connections reaching seaport terminals at Northern Anatolia, Georgia, Bulgaria and Romania.

The EU looks upon this network as an additional route that would complement other European routes and retains the following objectives(EC 2000a):

• To support the political and economic independence of the republics by enhancing their capacity to access European and world markets through alternative transport routes,
• To encourage further regional co-operation among the partner states,
• To increasingly use TRACECA as a catalyst to attract the support of international financial institutions (IFIs) and private investors,
• To link the TRACECA route with the Trans-European Networks (TENs).

TRACECA when the network is fully operational will provide combined transport services.

Combined transport, at the European level, is an individual mode of transport that makes maximum use of the advantages of the various modes of land transport and short sea shipping. Combined transport thus implies the organisation of intermodal door-to-door transport by transferring the goods from one mode of transport to another without changing the loading unit. Rail transport is to be the main and weighing land transport system all the way through this contemporary route.

European Conference on Ministers of Transport (ECMT) has confirmed combined transport in its priorities as an important individual mode of transport. Combined transport which is a combination of road and rail, also includes inland waterways and short sea shipping.

TRACECA network will eventually link the Pacific Ocean to the Atlantic. The 10.900 km rail link will affect more than one-third of the world population – figure wise, 2.2 billion people.

Pan-European Integration of Transport

An ECMT Transport Policy Forum was held in Paris on 26-27 February 2001 on the initiative of the ECMT Group on the Integration of New Member States. The main objectives of this Forum covered the following topics(ECMT 2001):

1. To enhance transition and support sustainable economic growth in European integration(including accession to the European Union), central, regional and local governments in the Central and Eastern European Countries are strongly encouraged to prepare, publish and regularly update transport policy documents, as an integral part of their long term economic and social policy. Such documents should be prepared with the participation of all interested parties and should preferably be approved by the appropriate legislative body.
2. For an effective transport policy, appropriate financial and human resources have to be allocated to each sequence of measures, allowing their proper implementation. Without clearly defined and available financial support from public budget(s) and proper education and training of the people charged with introducing the reforms, the implementation, reliability and seriousness of any transport policy remain highly uncertain and questionable.
3. Managing transport demand and influencing modal split are crucial tasks to be achieved by regulatory, fiscal and marketing and infrastructural measures, but also by making efforts to decouple

economic growth and demand for transport. Making better use of existing infrastructure and equipment, and providing opportunities for alternatives to road transport (rail, combined transport, navigation, etc.) are necessary to improve the quality of the transport system.
4. Efforts should be made to remove legal and social barriers hampering efficient involvement of the private sector in the financing and management of transport infrastructure. So far the experience with Public Private Partnerships has been rather disappointing and efforts should continue to be made to create the framework for greater involvement of the private sector in the development, maintenance and rehabilitation of transport infrastructure. Progress in the area of applying a wider range of user charges in CEE Countries needs to continue to be made.

5. The local, sub-regional, national, cross-country regional and global dimensions of the transport infrastructure network development should be kept in mind. In particular, the Balkans Transport Infrastructure Regional Study (TIRS) has been considered as an urgent task.
6. Lack of funding remains a crucial issue. Transport investment priorities need to be in line with the governments' public expenditure plan and the absorptive capacities of the countries. Sources of new funds need to be examined. There is a risk of over concentrating resources on projects of international interest at the expense of maintenance or regional or urban projects. In all aspects of priority selection, project preparation and feasibility studies, close formal and informal cooperation with international financing institutions and the European Commission has proved effective in building trust and in helping project implementation.
7. The forecast rapid growth of car ownership and road traffic has a strong potential to create a considerable flow of (fuel) tax revenues in the coming years, to the local, regional and central governments' budget. It is recommended to make use of the leverage effect of this eventual "surplus" to attract EU funds, IFI's credit and private capital and banks' loans into the financing of the transport sector, especially that of badly needed upgrading of transport infrastructure and maintaining public transport supply.
8. There is a need to continue to review and reform Governments' role in the management, control and regulation of the transport sector, in line with changes in the structure of public administration,enhancing decentralisation, corporatisation, commercialisation and privatisation,

when appropriate. An integrated approach is needed: since the different modes are treated together, the complementary effect of other sectors must be considered. As a consequence it is not the input (investment), but the targeted outcome that determines the required transport policy.

Turkish Transport Industry

Turkey is surrounded by four different seas by three sides, namely the Black Sea, Sea of Marmara, Aegean Sea and Eastern Mediterranean. Shipping, or waterborne transport in more general sense, is the prime transport means used by Turkish foreign trade whereas road transport is for the domestic trade.Domestic and foreign trade figures for the year 2002 clearly reveals this ongoing in terms of percentage figures(Table 2)(DİE 2004).

Tablo 2. Transport systems used in Turkish Domestic and Foreign Trades (2002)

İmports				
Transport system	Quantity (tons)	%	Value ($)	%
Shipping	75.620.005	89,7	24.550.042.334	54,9
Rail	559.934	0,7	395.005.029	0,9
Road	5.268.440	6,2	12.222.096.832	27,3
Air	137.531	0,2	5.632.347.427	12,6
Others	2.715.095	3,2	1.956.638.611	4,4
Total	84.301.005	100	44.756.130.233	100
Exports				
	quantity(ton)	%	value ($)	%
Shipping	33.120.239	82,0	14.685.029.516	46,2
Rail	371.468	0,9	225.516.415	0,7
Road	6.788.972	16,8	14.656.184.343	46,1
Air	82.797	0,2	2.093.129.458	6,6
Other	19.196	0,1	132.734.369	0,4
Total	40.382.672	100	31.792.594.101	100

When comparisons made amongst the well-organized nations it seems obvious that transport system planning is needed for betering up Turkish commercial activities.

Combined Transport

Second half of the 20th Century has witnessed ever-increasing market challenges. They have forced transportation to structural changes.

Combined transport is a mode, which links buyer with seller. The combined carrier performs service and may either be a ship operator or freight forwarder. In the eyes of a carrier seller or buyer who performs the transport contract may be named as charterer.

Carrier and charterer are the individuals, which have close relations with each other. Charterer asks for stability on shipping costs. It is essential for the charterer to protect / maintain its market. Carrier however tends to meet the charterer's such basic demand.

Continuous stability on transport costs cannot be maintained. With the effect of variable operation costs however, it tends to increase in the long run. Higher costs and the less productivity affect adversely the economy.

Carriers find themselves in difficulty in transferring the cost increase into the freight rate in areas where charterers are strong / powerful. In response, they rather tackle with the problem by increasing the productivity in transport services to set out of the problem. Hence they both meet the charterer's demand and evaluate the terms of competition in the direction of their interests; technology however enables the structural change.

Combined transport is the means of transport system integrating different transport systems like shipping, rail transport and road transport.

With the advent and rapid growth of containerisation, door-to-door delivery / transport system emerged. The traditional methods of port / terminal operation have changed at the outset; and conventional port functions have undergone modification. Seaport terminals and freight stations have replaced the conventional ports as handling medium, and ultimately seaport terminals turned into intermediate points for cargoes in the door-to-door delivery (Akten, 2001).

Containerisation has drastically caused port facility requirements to change as well as the methods of operation. Most of the World's ports went through an extensive and expensive transformation from break-bulk to container handling. The changeover has had a considerable impact not only on port operations but also port developments in connection with labour and staff as well as land and investment requirements.

The emergence of the container technology and of the door-to-door transport concept facilitated growing international trade; by way of

not only cost-effective transport and logistics services but also harmonization of the legal environment for door-to-door delivery.

Development of new forms of international transport (combined road/rail transport and short - sea shipping in Europe in particular) will in principle give an essence for the contemporary transport modes (Akten and Göneçgil, 2004).

Containerisation is the key element for multimodal transport operations. Multimodal transport covers the carriage of goods by at least two different modes of transport and may either be national or international in character.

"The terms multimodal, intermodal and combined transport are sometimes assumed to be the same. EMCT however has provided the following definitions:

a) Intermodal transport is the movement of goods in one and the same loading unit or vehicle, which successively uses several modes of transport without handling of the goods themselves in changing modes.
b) Combined transport is the intermodal transport where part of the journey is by rail, inland waterway or sea and any initial and/or final leg carried out by road is as short as possible.
c) Through transport is the door-to-door delivery of goods from supplier to customer.

Combined transport, at the European level, is a global approach to transport and an individual mode of transport that makes maximum use of the advantages of the various modes of land transport and short sea shipping. Combined transport thus implies the organisation of intermodal door-to-door transport by transferring the goods from one mode of transport to another without changing the loading unit.

European Conference on Ministers of Transport (ECMT) has confirmed combined transport in its priorities as an important individual mode of transport. Combined transport which is a combination of road and rail, also includes inland waterways, river and short sea shipping.

UN/ ECE (United Nations Economic Commission for Europe) defines combined transport as: "combination of means of transport where one (passive) transport means is carried by another (active) means which provides traction and consumes energy". UN/ECE used the term combined transport as being identical to the definition for intermodal

transport which is “movement of goods (in one and the same loading unit or a vehicle) by successive modes of transport without handling of the goods themselves when changing modes.” For transport policy purposes the ECMT restricts the term combined transport to cover: ”intermodal transport where major part of the European journey is by rail, inland waterways or sea and any initial and/or final leg carried out by road are as short as possible”.

Intermodal or combined transport offers a seamless connection between the transport modes/legs and covers the safe, efficient and door-to-door movement of goods. Carrier, or transport operator, accepts the corresponding responsibility from door-to-door delivery. Container revolution accelerated development of door-to-door movement (intermodal transport, multimodal transport, or combined transport) of goods to fulfil customers’ requirements, to offer competitive services and thereby making trade more efficient.

International transport generally implies the use of various transport links (interfaces and modes), each link corresponding to a transfer, storage or transport operation either in the country of origin, in a transit country, or in the country of final destination.
Integrated transport networks linking Turkey to EU are comprised one or some of the following integration of transport modes:

- Road+sea+road transports,
- Rail+sea+rail+road transports,
- Road+sea+road+rail+road transports

The UND and logistics firms have already performed some of the modal integrations.
On the other hand, several ro/ro links exist serving between Turkey and the EU member countries and their activities for the year 2003 are given hereunder (CS 2003):

Table 3. RO-RO lines (2003)

Line	Seaport Terminals	Number of RO-RO vessels
Turkey- İtaly	Haydarpaşa - Trieste	6
Turkey- İtaly	Ambarlı - Trieste	3
Turkey- İtaly	Çeşme - Trieste	4
Turkey- Ukraine	Zonguldak - Evpatoria	2
Turkey- Ukraine	Zonguldak - Skadovsk	1
Turkey- Ukraine	Zonguldak - Odessa	1
Turkey- Russia	Samsun - Novorossısky	2
Turkey- Russia	Trabzon - Sochi	2
Turkey- Georgia	Rize - Poti	1

Overall costs comparison for the lines in question however is given in Table 4 (CS 2003)

Table 4. Istanbul-Nürnberg – İstanbul Routes and Chatracteristical Values Slovenia

	Route 1	Route 2	Route3	Route4	Route5	Route 6
	Istanbul (Halkalı)-Bulgaria-Rumania (paid) Hungary (paid) Austria Nümberg	İstanbul Halkalı)-Bulgaria - Rumania (paid)-Hungary Szeged-Wels treni	İstanbul Halkalı)-Bulgaria - Rumania (unpaid)-Hungary Sopron-Wels treni	İstanbul-Bulgaria – Yugoslavia-Croatia-Slovenia-Maribor-Wels treni	İstanbul-Haydarpaşa Trieste RO-RO-Austria-Nürnberg	İstanbul-Haydarpaşa Trieste RO-RO-Villach-Wels treni Austria - Nürnberg
One-way Distance	2155 km	1555 km	1963 km	1734 km	712 km	504 km
Overall cost	1,454 Euro	1,434 Euro	1,503 Euro	1,089 Euro	2,076 Euro	1,993 Euro

Conclusion

Transport opens up new markets and helps to improve existing ones. Turkey, is a country geographically situated in between Europe and Asia offers good direct connections to EU countries,Turkic Republics,Middle East nations as well as African economies.

Geographical position of Turkey forces him to consider not only his commercial and economic needs but also the reqirements of the accessible economies having transport connections directly or intermodally in order to set up a joint welfare.

In this regard TRACECA Project to play an important role to set up connections between Turkey and Turkic Republics and with EU countries.

Turkey, in the age of door-to-door delivery, has to improve and assort its transport infrastructue to speed up hinterland and transit deliveries. At this stage planning and cordination in conjunction with the EU policies play an important role for a proper and seamless operation, as

well as to attract new potential modal traffic to enrich existing routes and lines.

Özet

Ulaştırma yatırım ve işletme standartlarının planlama çalışmaları, ayrıca ulaştırma sektörünün ve alt sektörlerin kapasite yetersizliğine bağlı olarak birimlerin servis sistemlerinde bekleme kayıpları ve maliyetleri ile kapasite fazlalığından kaynaklanan servis sistemlerinin boş kalma maliyetleri toplamının minimum/ekonomik olacak biçimlerde öngörülüp gerçekleştirilmelidir.

Türkiye'de ulaştırma sektörünün ve sistemlerinin gelişim olgusu ve politikaları, sosyoekonomik, makroekonomik ve kalkınma yaklaşımları, dış ticaret ilişkileri ve gelişmeleri içinde ele alınmalıdır. Ulaştırma sektörünün ve sistemlerinin verimliliği diğer temel ve üretim sektörlerinin verimliliğine bağlı olduğundan temel üretim sektörlerinin üretkenliğine, dış ticaret ilişkilerine öncelik verilmelidir. Bu bağlamda ayrıca, AB, Orta Asya, Orta Doğu, Karadeniz, Kafkasya ve Balkan ülkelerinin, komşu ülkelerin üretim, dış ticaret ve ulaştırma sektörü olanaklarına önem verilmelidir. Türkiye Karadeniz kıyısı limanları arasında TRACECA projesi çerçevesinde kombine layner taşımacılığına önem vermelidir. Bu bağlamda deniz ticaret filosunun uyumlaştırılmasına ve yenileştirilmesine öncelik verilmelidir. Türkiye'nin ayrıca, kendi makroekonomik yapısı ile Orta Asya, Orta Doğu, Karadeniz, Kafkasya ülkeleri arasında kararlı ve güvenilir makro ekonomik ve diş ticaret ilişkilerini geliştirme projeleri, AB'nin Türkiye'ye yönelik ilgisini ve ilişkilerini kuvvetlendirme olanağı sağlayabilir. Bu ülkeler, ulaştırma hatlarındaki yolcu ve yük taşıma kapasitesi yetersizliklerine bağlı sıkışıklıkların ve darboğazların ulaştırma yatırım ve işletme olanakları çerçevesinde ekonomik olarak çözülmesine önem vermelidir.

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