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THE V₄ RAILWAY COOPERATION – IS THERE A HOMOGENEOUS VISEGRAD RAILWAY AREA? –

This paper intends to provide a comprehensive overview of the railway policies the Visegrad Group (the Czech Republic, Hungary, the Republic of Poland and the Slovak Republic)² has followed since its accession to the European Union. On account of their central geographical position in Europe, these four states have numerous strategic, economic, cultural and historical features in common that have provided a solid platform for a joint transport planning based on shared interests.

Prior to the elaboration of this paper, the assumption was that there had to be a homogeneous and integrated Visegrad Railway Area driven by common attributes and needs. Through research and analysis of official memoranda of understanding, presidency programs, minutes of expert meetings, panel discussions, EU documents and statistical data, this paper concludes, however, that one of the reasons for the large number of V₄ common positions concerning international railway policies is the fact that the railroad networks of the states concerned are deeply integrated in the system of pan-European corridors. Additionally, all the four states concerned are net recipients of EU structural funds and they need to cooperate in the allocation and coordination of infrastructure development projects financed by such mechanisms. The intention of the incumbent Visegrad Governments to upgrade and add new connections to the existing east-west and north-south transportation routes may have resulted in an interconnected railroad network within the Visegrad Area, however, their main scope has been to exploit better the business opportunities of the Eurasian passenger and freight railway services. Consequently, such endeavors have not only pulled these countries together, but also have given rise to growing competition among them.

This paper shall contribute to the better understanding of the transportation needs of a region that is located in the crossroads of east-west and north-south corridors. This study is also intended to shed a light upon the important role of transportation planning in the support of economic development.

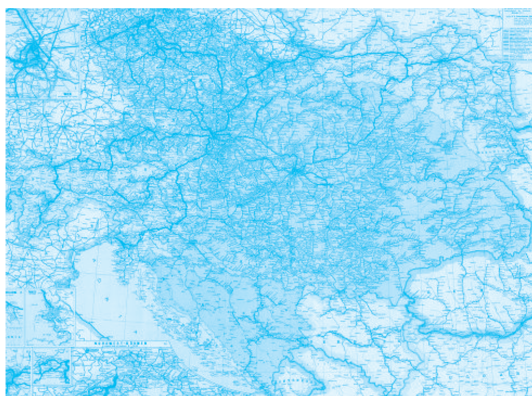
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2 Hereafter the following name variations for Visegrad Group will be used: "the Visegrad Four", "V₄", "Visegrad Countries", "Visegrad States", "Visegrad Region" and "Visegrad Area".

1. THE BACKGROUND OF RAILWAY POLICIES IN THE VISEGRAD AREA

1.1. A HISTORICAL-THEORETICAL SYNTHESIS ON RAIL TRANSPORT CONNECTIONS AMONG V4 STATES

Nowadays, the Central Eastern European (“CEE”)³ railway network is characterized by three main features. Firstly, the railroad network to some extent preserved certain characteristics of the former Austro-Hungarian Dual Monarchy’s (“Austria-Hungary”) transportation system as the core of the region’s track network was originally laid down in the second half of the 19th century. During that era, economic and trade connections of great significance were born in large numbers primarily due to the expansion of transport possibilities via railways. Prague, Vienna and Budapest became hubs for connections to Baltic and Adriatic ports. Bratislava (Pozsony / Pressburg) was important for its position between the Austrian and the Hungarian capital cities, while Warsaw was situated in the so-called “corner of the three empires” where Austria-Hungary, Russia and Germany shared a common border, and the city became strategically crucial for international carriage. CEE has thenceforth been characterized by a relatively dense intertwining of transport networks [Bianchini, 2009: 2-9].⁴ The tracing of new state borders after the First World War interrupted the original evolution of rail infrastructures in the region. After the dissolution of Austria-Hungary, the successor states nationalized the former imperial rail infrastructure’s sections that were located within their freshly-drawn borders [Garber & Spencer, 1994: 3]. The CEE railway grid that suffered immense damages during the two World Wars were then reconstructed during the subsequent Cold War era.



Map 1: Railway map of Austria-Hungary (1913) [BahnMedien Bahnhistorische Publikationen, 2018]

3 The European Commission categorizes the notion “CEE” as a group of countries comprising the Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia [European Commission, 2012: 19]. In this paper, the European Commission’s CEE concept is used.

4 From the 1840’s on Budapest has become the railway hub of the Kingdom of Hungary within the Dual Monarchy, covering the major part of the Carpathian Basin including the territory of modern days Slovakia [Bianchini, 2009: 2-9].

Secondly, the heavy industrialization and socialist type planned economy systems coerced on Czechoslovakia, Hungary and Poland in the Cold War era (1947-1990) forced the development of rail traffic primarily in the direction of the Union of Soviet Socialist Republics (“Soviet Union” or “USSR”), while the railway lines heading towards Western European countries became less prioritized. The post-war relationship among the so-called socialist states in the CEE region was predominantly characterized by isolation: many of the old Austro-Hungarian rail connections had lost of their significance or ceased to be functioning, while most of the relatively busy railway links led exclusively towards the Soviet Union. Prior to the 1989 regime changes, both Hungary and Czechoslovakia had quite sophisticated rail manufacturing know-how and industries, therefore these states supplied rolling stock material to other Eastern Bloc countries [Griffin, 2007: 64], while the import of iron ore transported from the USSR dominated the freight traffic movements in the area [Savchuk, 2014: 166].

And thirdly, after the fall of the Iron Curtain, all transportation modes have been developed on an east-west axis reflecting the routes of major freight movements between the European Communities and the former Eastern Bloc countries. A dense rail network has been built in the CEE region with connections to the main pan-European transport corridors. These *a priori* factors have provided the background for the railway policies of CEE countries through the past 100-150 years and still determine the future advancement of the sector.

1.2. IMPORTANT STRUCTURAL CHANGES IN THE RAILWAY SECTORS OF V4 COUNTRIES

The rail sector’s development has followed slightly parallel trajectories in the V4 Countries. After the 1989 regime changes, rail traffic has lost a lot of its significance in the Visegrad Area, while passenger travel by rail has been notably rising in the western part of the continent. From 1989 to 2004, long-distance passenger rail travel had declined by 36% in the Czech Republic, by 26% in Hungary and by 54% in Poland primarily because of the negative brand of railway travel among passengers and in public discourse, due to mediatized failures. The fall of rail share of total freight was most remarkable in the Czech Republic and in Poland: from 73% and 67% (1990) to 25% and 39% (2002), respectively. [Pucher & Buehler, 2004: 5-6].⁵ The railway industries have always been very concentrated in the countries that formed the Visegrad Group in 1990, and the robust structure of the national railway companies have impeded their ability to respond quickly to new challenges and go through extensive structural reforms [Griffin, 2007: 79]. In the 1990’s, Budapest, Bratislava, Prague and Warsaw reported low average technical efficiency results in terms of national railway company operation [Wetzel, 2008: 21]. The total capital productivity levels in terms of technical efficiency of their national railway companies were also under Western European average levels. Until their accession to the European Union (“EU”), V4 governments had not been efficient enough in combining track infrastructure and rolling stock assets to deliver considerable economic outputs. Rail infrastructure thus needed to be improved

⁵ In terms of market of passenger rail services, the Slovak Republic has had a 66% reduction, Poland reported a 51% decrease, and the Czech Republic has had a 48% reduction over the period 1990-2006. Hungary has witnessed an overall 41% reduction since the 1970’s [Givoni & Banister, 2008: 4].

in order to attract passengers, boost cross-border cooperation, open up V4 economies and draw new trade partners to the region. At the time of their accession to the EU in 2004, the Czech Republic, Hungary and Poland had the longest railway network among the new Member States, which altogether constituted the 79% of the new EU Countries' railway system. The railroad density in the Czech Republic has been constantly around 120-121 km per 1,000 km² since 1989, which has been one of the highest rates in the European Union [EUROP, 2004: 78-79] [Kartal, 2007: 19]. The Czech Republic – together with Austria and Sweden – currently ranks among the top three EU Member States in terms of the number of train kilometers per inhabitant due to the fact that all of its major cities are located along significant rail corridors [Steer Davies Gleave, 2015: 21]. As of 2016, the country has 9,564km of railway lines [Eurostat, 2018e] and 15,539km of tracks, out of which 45% is electrified [Eurostat, 2018d; 2018g]. As of 2016, Poland has 19,132km of railway lines [Eurostat, 2018e], while the total length of railway tracks in the country stands at 37,386km, out of which 67% is electrified [Eurostat, 2018d; 2018g].

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Czech Republic	3,060	3,078	3,153	3,210	3,208	3,217	3,216	3,216	3,237	3,236
Hungary	2,738	2,738	2,792	2,929	2,981.5	2,982	2,968.6	3,014	2,963	3,018
Poland	11,898	11,924	11,956	11,916	11,880	11,920	11,868	11,830	11,865	11,874
Slovakia	1,578	1,577	1,577	1,578	1,578	1,586	1,586	1,586	1,587	1,587

Graph 3: Length of electrified lines in V4 Countries [Eurostat, 2018d]

Since the 1990's, the average length/surface ratio in Slovakia has constantly stood at 75 km per 1,000 km², while in Hungary such ratio has not moved from 82-83km per 1,000 km² as opposed to the EU average 50 km per 1,000 km² [EUROP, 2004: 78]. As of 2016, Hungary has around 7,811 km of railway lines, while Slovakia has 3,206 km [Eurostat, 2018e]. The total length of rail tracks in the southernmost V4 State stands at 11,424km (with an electrification level of 47%), and in the country of the Carpathian Mountains the figure is 3,626km (with an electrification level of 44%) [2018d; 2018g]. The density of the two networks is relatively high on a European scale, however, there is a constant need for renewal and maintenance of the two countries' rail infrastructures [Ilie, 2016].

The railway systems of Visegrad States have heterogeneous attributes too. In technical terms, the Visegrad Region is not a homogeneous area as far as the different railway electrification systems of these four states is considered. Hungary predominantly uses alternating current 50 Hz / 25 kV, while the power supply system in Poland is dominated by direct current 3 kV. The Czech Republic and Slovakia have mixed electrification systems. The southern regions of the Czech Republic is covered with 50 Hz / 25 kV AC system (1,381 km), while the rail network of the northern territories is equipped with 3 kV DC (1,817 km). Similarly, in the southwestern part of Slovakia, the 50 Hz / 25 kV AC system is used (761 km), and the northeastern zone is covered with 3 kV DC wires (778 km) [Eurostat, 2018d]. The ratio between standard and broad-gauge⁶ rail track systems also shows differences between the four CEE countries. There is a 537

⁶ In this paper, by "large gauge" the Author refers to track systems broader than the 1,435mm standard distance between the interior surfaces of the two railheads of a single track.

km long large-gauge railroad network in Poland (2% of the total length of rail lines), 99km in Slovakia (3%), and 37km in Hungary (0,5%), while as of 2016, there are no broad-gauge railway tracks on the territory of the Czech Republic [Eurostat, 2018f].

The evolution of the modal split of freight transport in the V4 Countries have followed similar paths, however, there have been some significant discrepancies too. While through the past ten years, 17-18% of the total cargo shipments has been handled on rails in the European Union, the V4 Countries have reported more favorable ratios for the sector with data around or above 30%. As of 2016, Bratislava leads the way in this sense with the railway sector being responsible for the 34.5% of the total freight transport in the country, although, the modal share of the railways used to be at around 48% in 2005-2006. Since it joined the EU, the volume of cargo shipments on railways has generally decreased in the Czech Republic too: for 2005, Prague reported 31.5% rail share, ten years later, however, the figure stood at 26.4%. Warsaw also has faced significant drops in this field. In 2005-2006, the modal share of the rail sector in freight shipments was reported to be 37%, while by 2016, such number had become less than 25%. In contrast to the above-noted three countries, the evolution of the modal share of railways in freight transport in Hungary has not followed clearly linear tendencies. From 2006 to 2014 the railways' share decreased from 28% to 24.1%, but since then, the ratio has been growing reaching maximum levels in 2014 (31.1%). In 2016, 28.5% of the total freight movements was handled by cargo trains in Hungary [Eurostat, 2018b]. In the past two and a half decades the Visegrad States have gone through deep economic liberalization and profound political transformation required for their accession to Euro-Atlantic organizations.⁷ Since the four countries joined the European Union, railway-related reforms in the region have followed EU requirements and legislative measures, yet some organizational differences could have been identified among the four models. Prague chose a mixed structure of organizational and institutional separation by establishing distinct entities with strong monetary and operational connections [Wetzel, 2008: 2]. The vertical restructuring of the Czech railway business structure has begun in 1994 with the accounting separation of the state-owned company followed by legal separation in 2003 [Friebel et al., 2007: 260]. The infrastructure administrator SŽDC (*Správa železniční dopravní cesty*) was created in 2002 with complex legal relationships to the main railway operator *České dráhy* ("ČD"). SŽDC owns the infrastructure, while the vertically integrated monopolist ČD is its operator in exchange of a management fee [Friebel et al., 2007: 261]. The first passenger train services provider company (LEO Express) in the Czech Republic was founded in 2010. It operates trains also in Slovakia, Poland, Ukraine, Germany, Austria, and Hungary [Bloomberg, 2018]. Since 2011, another private entity named RegioJet has also been operating regular passenger railway transport in the Czech Republic and Slovakia [RegioJet, 2018a; 2018b].

⁷ The V4 market's first international third party rail services provider appeared in the Czech Republic in 1995, followed by Slovakia (1997), then Hungary and Poland (1998). The first third party domestic rail freight services provider started operating in Slovakia (1994), followed by the Czech Republic (2000), then Poland (2004) and Hungary (2005). The first third party domestic rail passenger services providing company started doing business in Slovakia (1994), followed by the Czech Republic (2000) and Poland (2004), while in Hungary such entities are not present at the time of finalizing this paper [Wetzel, 2008: 16].

TIME	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Czech Republic	20	23	24	24	28	30	32	34	43	47
Hungary	2	2	2	16	:	47	52	52	52	52
Poland	39	43	47	48	57	58	69	69	72	75
Slovakia	9	12	15	16	14	14	17	16	16	16

Graph 1: Number of railway enterprises in V4 Countries [Eurostat, 2018c]

The vertical restructuring in Poland has begun in 2002 with the accounting separation of the state-owned railway company PKP (*Polskie Koleje Państwowe*) that was followed by legal separation in 2003. The railway lines are mainly operated by PKP that is responsible for the maintenance of tracks and the management of railway land, conducting trains across the country as well as scheduling timetables [Allen & Overy, 2006: 8]. The relatively poor condition of the Polish railway infrastructure results in the need to impose speed limits on many lines. The demand for passenger rail transport decreased by 32% over the period 1994-2004, while a less drastic (20%) drop was reported for rail freight transport. Following the country's EU accession, private provision of rail services has grown, with a share of 20% of the total rail freight market. [ECORYS Nederland, 2006: 15-21] [Kominek & Lysenko, 2007: 170]. For the period 2016-2017, the quality of rail transport infrastructure in Poland was ranked at 4.46 compared to the EU average rating of 5.15 [European Commission, 2018b]. As the quality ratings of the Polish rail transport infrastructure are getting closer to the EU average, more and more people opt for using train services. PKP carried more than 279.3 million passengers in 2017, which figure is 3.77% more than the data reported for the previous year [visegradgroup.eu/PAP, 2017].

TIME	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Czech Republic	6,922	6,898	6,773	6,472	6,559	6,669	7,196	7,512	7,644	8,125
Hungary		8,752	8,291	8,004	7,653	7,763	7,769	7,806	7,710	
Poland	18,240	19,524	19,762	18,128	17,485	17,633	17,674	16,659	15,885	17,240
Slovakia	2,213	2,165	2,296	2,264	2,309	2,431	2,459	2,485	2,583	3,411

Graph 2: Total annual passenger transport – Millions of passenger-kilometres [Eurostat, 2018h]

The accounting separation in the Slovak Republic was initiated in 1994, while the legal separation process has begun in 2002 [Friebel et al., 2007: 260]. The Slovakian rail network is owned by two national companies [Allen & Overy, 2006: 8]. The railway infrastructure manager *Železnice Slovenskej republiky* ("ŽSR") and the railway passenger transport company *Železničná spoločnosť Slovensko* ("ŽSSK") are responsible for the administration of the railway infrastructure and the operation of passenger transport, respectively, while ŽSSK Cargo provides freight services [Ilie, 2016].

In Hungary, the vertical restructuring of the railway operation system was launched in 2003 with the accounting separation of the state-owned *Magyar Államvasutak* ("MÁV") followed by legal separation in 2004-2005. There is reciprocal access between the dominant carrier MÁV and the regional, mostly international services provider Győr-Sopron-Ebenfurti Vasút (GySEV), both vertically integrated [Friebel et al., 2007: 260-268]. Operations and policy-making functions have been separated and core railway functions have also been divided into individual business

units within the MÁV-Group. MÁV-Start started doing business as a separate passenger operator in July 2007. The entire rail transportation system was theoretically opened to foreign railway companies by 2007, when Budapest established a regulatory office and created different legally independent companies to provide passenger and freight services increasing the competition in the freight transportation sector [Allen & Overly, 2006: 8] [Chirmiciu & Steves, 2007: 4].

The opportunity to upgrade the extensive but relatively underdeveloped and obsolete V4 railway infrastructures has attracted foreign investors in the 1990's. It has always been crucial for business centers, factories, industrial plants or logistical sites to be situated in the vicinity of good transport facilities. The enlargement of the European Union to 25 members in 2004 gave another impetus to trading links between Eastern and Western European economies. The east-west passenger and freight flows within the European Union reinforced the creation of trustable freight corridors and logistics terminals. Economic growth goes hand in hand with a developing transportation network. Currently, road transportation has the biggest modal share and is still growing in the V4 region. Therefore, in order to decrease energy consumption and environmental pollution, Visegrad governments follow EU tendencies and adopt new transport policies giving special focus to the channeling of the growing transport demand into more environmentally-friendly modes [Interreg-Danube, 2014]. As of 2017, ratings of the quality of railroad infrastructure in the Czech Republic and Slovakia stand above, while in Hungary and Poland such indexes rank below the average EU level.⁸ As a result, rail freight transport market has started to grow in the Visegrad Region, and in 2017, the Czech, the Hungarian, the Polish and the Slovak railway systems reported promising figures for the intensity of use mostly driven by freight utilization. [Duranton et al., 2017: 8].

TIME	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Czech Republic	5,779	6,060	5,410	6,589	7,321	7,852	8,793	9,165	10,212	10,804
Hungary	3,106	3,882	4,132	5,010	4,557	3,360	4,757	4,016	5,816	5,907
Poland	3,845	4,679	3,232	4,403	5,760	7,970	8,510	9,060	9,507	11,718
Slovakia	1,809	2,280	1,985	2,779	2,243		2,018	1,864	4,709	4,955

Graph 4: Annual railway transport of goods (containers & swap bodies, thousand tonnes)
[Eurostat, 2018a]

Given their dependence on foreign trade partners and markets located outside of the region, V4 Countries are in need of modern, upgraded and reliable freight transport networks. Additionally, as Visegrad States have important economic links between each other too, the considerable gaps these countries have in their railway infrastructures in terms of travel speed, time and reliability constitute a notable burden on the economic growth of the region.⁹ From

⁸ The 2016-2017 railroad quality indexes: **the Czech Republic:** 4.41; **Slovakia:** 4.43; **Hungary:** 3.60; **Poland:** 3.56; EU average: 4.30. [European Commission, 2018b]

⁹ Here follows a list of the 2016 top five importers in the V4 Countries. **The Czech Republic:** Germany, Poland, China, Slovakia and the Netherlands; **Hungary:** Germany, Austria, China, Poland and Slovakia; **Poland:** Germany, China, the Netherlands, Russia and Italy; **Slovakia:** Germany, the Czech Republic, Austria,

the perspective of passenger transport, the improvement of rail linkages stimulates economic development by boosting business relations and tourism [Dühr, 2014: 24-34; 48].¹⁰

2. THE LEGAL-INSTITUTIONAL PILLARS OF THE V4 RAILWAY COOPERATION

The V4 Cooperation introduced regular and ad hoc ministerial conferences and experts group meetings of rail professionals in order to harmonize their positions on EU railway policies whenever their interests coincided [visegradgroup.eu, 2004b]. These professionals found that the Second Railway Package¹¹ proposed by the European Commission with the aim of constructing an integrated European railway area would definitely accelerate the liberalization of rail freight services in Europe, however, they requested that the opening of the rail freight market to competition as from January 2007 would happen in line with the interests of the relatively weak CEE economies [visegradgroup.eu, 2004a]. Railway infrastructure managers and capacity allocation bodies doing business in the Visegrad Area joined RailNetEurope (“RNE”), an association that facilitates the provision of international business services. RNE was founded in 2004 and by currently it has jurisdiction over 230,000km of railway lines operated by the 34 member companies registered in 25 different countries.¹²

The Visegrad States have put emphasis on the exchange of experiences in the implementation of railway transport constructions co-financed by the Connecting Europe Facility (“CEF”)¹³. As net recipients of EU structural funds, Budapest, Bratislava, Prague and Warsaw have always been active players in the informal “Friends of Cohesion Policy” club and managed to get the highest amount of EU funds per capita for the 2014-2020 multiannual financial period. EU Cohesion Policy investments helped the region improve public transport by purchasing new rolling stock, upgrading railway infrastructure or constructing new sections, etc. The deployment with the second level of the European Train Control System and various rehabilitation as well as

Poland and Hungary. The 2016 top five exporters in the V4 Countries are as follows. **The Czech Republic:** Germany, Slovakia, Poland, France and the UK; **Hungary:** Germany, Romania, Slovakia, Austria and Italy; **Poland:** Germany, the UK, the Czech Republic, France and Italy; **Slovakia:** Germany, the Czech Republic, Poland, France, and the UK [Nations Encyclopedia, 2018].

10 Passenger train services between Slovakia and Poland had been suspended for many years and were relaunched in 2017 mostly targeting leisure traffic. In the summer season the Polish regional railway company PolRegio operated weekend-only trains from Rzeszów and Sanok to Medzilaborce, using the 15.6km cross-border line where passenger services ceased in May 2011. After a pause of 14 years, the Slovak ŽSSK also reinstated passenger services on the 30km line between Zohor and Plavecké Pohradie, with two pairs of weekend trains operating in the summer season [Railway Gazette, 2017].

11 The 1. railway package was adopted in 2001 and gave railway operators the right to enter the trans-European network on a non-discriminatory basis. The Third Railway Package adopted in 2007 introduced open access rights for international rail passenger services. [European Commission, 2018e]

12 Here follows a list of RNE Members from the V4 Region. **The Czech Republic:** SŽDC; **Hungary:** MÁV, GySEV, VPE; **Poland:** PKP; **Slovakia:** ŽSR [RailNetEurope, 2018]

13 CEF is an EU funding instrument promoting targeted infrastructure investments including the development of trans-European transport, energy and digital services networks [European Commission, 2018a]

construction projects on key rail corridors have been at the center of the Visegrad Countries' infrastructure development strategies supported by EU funds [visegradgroup.eu, 2013] [MZV, 2014: 5]. The governments of the Visegrad States have realized that ensuring interoperability between the different lines and the elimination of bottlenecks in the region's network are essential for the competitiveness of rail [DTCP, 2014: 20].



Map 2: European deployment plan for ERTMS [Railway Gazette, 2009]

All V4 Countries take part in the cooperation launched in 2005 by the European Commission, manufacturers, infrastructure managers as well as undertakings from the rail industries of EU Member States to deploy the European Rail Traffic Management System (“ERTMS”) on the key rail network of the Community.¹⁴ Therefore, the EU’s economic, social and territorial cohesion strategies have been used in the V4 Region as financial tools and coordinating mechanisms of initiatives aimed at harmonizing technical and safety regulations of the railway networks [Interreg, 2014]. Since 2009, these four states have agreed to intensify their efforts in supporting the development of the ERTMS deployment in the region [visegradgroup.eu, 2009] [visegradgroup.eu, 2010].

According to recent deployment plan deadlines, the system on the core network corridors passing through the V4 Region will be implemented within a five-six year term. ERTMS is already in operation on some Polish and Slovakian elements of the Baltic-Adriatic corridor running through the territories of Poland, the Czech Republic and Slovakia, other sections of the route would be deployed with the system beyond 2023. The same goes for the Rhine-Danube route (involving the Czech Republic, Slovakia and Hungary), the North Sea-Baltic Corridor that concerns only

¹⁴ ERTMS is an automatic train protection and safety standard allowing the construction of an interoperable railway system in the EU amid compliance with speed restrictions and signaling status. The Association of the European Rail Industry (“UNIFE”) elaborated ERTMS in close cooperation with the European Union, railway stakeholders and the GSM-R industry in order to replace the different national train control and command systems in the EU [ERTMS, 2018].

Poland and the Mediterranean corridor that from the region crosses only Hungary. 2018 is a year when huge progress was achieved as far as the installation of the ERTMS system is concerned on the Orient / East-Med Corridor that connects the Czech Republic, Slovakia and Hungary with Northwestern as well as Southeastern European destinations [European Commission, 2017: 3/10-27].

As EU Member States, V4 Countries may opt for requesting professional assistance from the different specialized bodies of the European Union Agency for Railways (“ERA”) whenever difficulties arise related to the implementation of EU railway legislations.¹⁵ In addition, numerous entities registered in the countries of the V4 Cooperation are members of the most important and first-ever global railway organization: the International Union of Railways (*Union Internationale des Chemins de fer*, “UIC”) that was created in 1922 to promote rail transport on a global scale with special focus on standard-setting and network interoperability.¹⁶ The Czech Republic, Hungary, the Republic of Poland and the Slovak Republic are Member States in the Warsaw-based Post-Soviet intergovernmental forum called the Organization for Co-operation between Railways (*Организация Сотрудничества Железных Дорог*, ОСЖД / “OSJD”) where incumbent transport ministers, railway company general directors and specialized expert committees work on the development and improvement of international railway as well as combined transport within the countries that once formed the Warsaw Pact [OSJD, 2018]. Additionally, ČD Cargo from Czechia, MÁV from Hungary, PKP from Poland and ŽSSK Cargo from Slovakia are all participating companies in the Coordinating Council on trans-Siberian Transportation (*Координационный Совет по Транссибирским перевозкам*, КСТП / “CCTT”), a Russia-led international organization created with the aim of attracting transit and foreign trade cargo shipments to the trans-Siberian route [CCTT, 2018].

The Ministry of Transport of the Czech Republic, the Ministry of National Development of Hungary, the Ministry of Infrastructure and Development of Poland, and the Ministry of Transport, Construction and Regional Development of Slovakia represent the V4 Countries in the Intergovernmental Organization for International Carriage by Rail (*Organisation intergouvernementale pour les transports internationaux ferroviaires*, “OTIF”) that promotes the improvement and facilitation of international rail traffic by offering a framework for cooperation in order to agree upon uniform legal regimes and systems of technical compatibility and harmonization. OTIF also strives for the elimination of barriers to border crossings between its 50 Member States [OTIF, 2018].

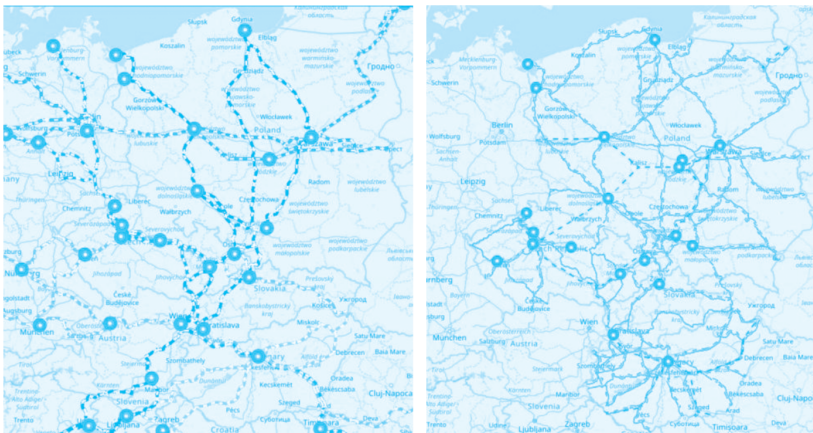
15 From 2019 onwards, ERA will become an integrated European authority to issue single EU-wide safety certificates to railway undertakings; vehicle authorizations for operation in more than one country; as well as pre-approvals for ERTMS infrastructure [ERA, 2018].

16 Here follows a list of UIC Members from the V4 Region. **The Czech Republic:** ČD (1922), SŽDC (2006) and the private regional passenger services provider RegioJET (2012); **Hungary:** MÁV (1922), GySEV (1976), VPE (2005), GySEV Cargo (2009), the Ministry of National Development (2012), and the private cargo shipping company FoxRail (2013); **Poland:** PKP (1922) and *Instytut Kolejnictwa*, the railway research institute of the Ministry of Infrastructure and Construction (2002); **Slovakia:** ŽSR (2002), ŽSSK (2002), ŽSSK Cargo (2004) and the touristic trains services provider WagonService Travel (2012) [UIC, 2018].

3. PAN-EUROPEAN TRANSPORT CORRIDORS (TEN-T AND RFC SYSTEMS)

A multimodal TEN-T network equipped with innovative transport technologies strengthens the internal market, increases competition, generates higher employment rates, reduces congestions, cuts emissions of greenhouse gases and boosts transport safety and speed. Since their accession to the EU, V4 States have supported undertakings designed to strengthen the cooperation in the areas of TEN-T systems [visegradgroup.eu, 2008]. Visegrad Countries have become integral parts of some of the priority transport axes, and the creation or enhancement of such routes is given a special priority in their Cooperation [Lackenbauer, 2004: 152].

In 2009, The Visegrad Group declared its readiness to promote the European integration of countries from the Western Balkans and the Eastern Partnership initiative of the EU also by facilitating the construction of reliable road, rail and energy networks in the region [MFA, 2009] [visegrad.info, 2010]. V4 Governments agreed that the future EU Member States had to be linked to the Community via fast and reliable transport routes, therefore, they suggested programs for the intensification of the four countries' efforts to support the development of international rail freight corridors and road infrastructure within the TEN-T network [visegradgroup.eu, 2010; 2018: 11]. In November 2010, the V4 transport ministers agreed that the TEN-T projects of the European Union should take into consideration the existing differences among old and new Member States in terms of their levels of economic and infrastructure development as well as geographic location [visegradgroup.eu, 2018: 12-13]. The ministers also affirmed that TEN-T projects should respect the principles of subsidiarity, ensure quality road and rail infrastructure connecting underdeveloped regions within Member States in order to provide geographically balanced access to the major transport corridors of the Community. The ministers promised they would act together to strengthen the mobility of citizens and cross-border cooperation [visegradgroup.eu, 2018: 51].



Maps 3-4: Core Network Corridors (Rail) and RFCs in the Visegrad Four Countries
[European Commission, 2018c]

In addition to such projects, launched in 2016, the joint Polish-Croatian political-economic “Three Seas Initiative” aims at strengthening trade, infrastructure, energy and political co-

operation among Austria, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia. The project prioritizes the development of railway connections within the European transport corridors [Louppova, 2016].¹⁷

In 2012-2013 the Visegrad Governments elaborated a common position on the implementation of the EU regulation n. 913/2010 that created a competitive European rail freight network. The list of initial routes included five Rail Freight Corridors ("RFC") crossing V4 territories responding to concrete operational and market-driven demands. The RFCs are cross-border governance structures involving ministries, infrastructure managers, railway undertakings and logistics terminals. The RFC network covers routes outside of the TEN-T network too [Carvalho et al., 2018: 29]. Route "RFC 5" crosses Poland, the Czech Republic, Slovakia, Austria, Italy and Slovenia and has been operational from November 2015 [RFC-5, 2018]. RFC 6 was launched in November 2013 and links the Spanish city of Almería to the Hungarian town of Záhony located by the country's border with Ukraine through France, Italy and Slovenia (with links to Croatia) [railfreightcorridor6.eu, 2018]. RFC 7 was established in November 2013 by the cooperation of the transport ministries, infrastructure manager companies and capacity allocation bodies of the Czech Republic, Slovakia, Austria, Hungary, Romania, Bulgaria and Greece [RFC-7, 2018]. RFC 8, or the so-called North Sea-Baltic route, was established in November 2015. It includes more than 6,000km of railway lines connecting the most important North Sea ports with Central European and Baltic terminals. The route runs through the Netherlands, Germany, Poland (with links to the Czech Republic), Belarus and Lithuania (with links to Sweden). It is intended to be gradually extended to Estonian and Latvian destinations as well as towards gauge-changing terminals at the Polish-Ukrainian border [RFC-8, 2018]. The RFC 9 (Czech-Slovak Rail Freight Corridor) has been operational since November 2013 and formulates a linkage between Prague and Čierna nad Tisou (Slovak-Ukrainian border) with a total length of 1,248 km [SŽDC, 2018]. The governments of Hungary, Poland, Slovakia and Slovenia established a rail freight corridor linking the Slovenian seaport of Koper and the Polish dry port in Małaszewicze on the Belarusian border with further plans to make connection to the railway system of Serbia. Amber Rail Freight Corridor (RFC 11) strengthens the north-south axis [MÁV, 2017].

From 2012 on, V4 presidency programs have included general discussions on the construction of future high-speed passenger rail lines in the region [MSZ, 2012] [MZV, 2014]. Given the need for a fast north-south train service, during their February 2016 bilateral negotiations, the prime ministers of Hungary and Poland agreed to improve rail connections between their countries [MTI/Miniszterelnök.hu, 2016]. In the absence of a direct Warsaw-Budapest railroad connection that bypasses the Czech Republic and goes through the mountainous region of the Tatras in Slovakia, such high-speed route would most probably run through the territories of all the four Visegrad Countries. Currently, the average travel time on the 625km long Budapest-Krakow route is 9-10 hours, while the more or less the same long Budapest-Prague line (611km) can be run in 6 hours [MÁV Csoport, 2018a; 2018b]. In addition, the fastest road link between the

17 In July 2017, the President of the United States, Donald Trump attended the Warsaw summit of the Three Seas Initiative and welcomed the creation of stronger trade relations in the CEE Region as a key to assure alternative solutions instead of the Russian energy and raw material supplies [Visegrád Post, 2017].

Hungarian capital and the second largest Polish city is less than 400km long and can be covered in six hours [MyDrive Route Planner, 2018].

Since 2014, multilevel V4 meetings have paid attention to the traffic problems caused by the bottlenecks in the area. The 2014-2015 Slovak Presidency, for instance, strived to coordinate the working of a High Level Working Group (“HLWG”) on transport connections between Visegrad Countries with the aim of implementing the previous V4 agreements facilitating cross-border rail traffic [MZV, 2014]. Several HLWG meetings have been held focusing on the progress achieved in that field [visegradgroup.eu, 2015]. All in all, having presented the abovementioned indicators, one may come to the conclusion that the building up of an integrated Visegrad Railway Area is just a collateral profit and not the real aim of the V4 railway cooperation that strives for strengthening each other’s positions related to international railway development initiatives.

4. THE APPLE OF DISCORD: FIGHT FOR THE NEW “SILK ROADS”

In order to have a more subtle vision about V4 railway policies, one must not forget about the centrifugal forces that make the elaboration of an integrated, permanent and strong Visegrad railway cooperation quite difficult. Visegrad States may have a lot of geopolitical, economic, military-security, and cultural-historical features in common, they also have however, slightly different political rationalities prioritizing different strategic objectives [Tóth, 2017]. Since 1989, V4 Countries have been in constant competition with one another for Western financial and security aids and resources [Bársony, 1998]. These states have thus become competitors in some economic sectors (steel production, automotive industry or agricultural areas) and on the east-west freight transport market too.

The Visegrad Countries’ rail networks are important parts of the European rail market due to their favorable geographical situation. Given their land-locked positions (with the exception of Poland) and the increasing level of Asia-Europe rail traffic, the strengthening of these countries’ railway relations towards Eastern Asian countries is definitely advantageous for the region’s performance in terms of international trade balances. The presence of Chinese companies, and the “*One Belt and One Road*” initiative of Beijing’s diplomacy have resulted in the establishment of rail land-bridges via Visegrad Countries towards Western European destinations, significantly shortening the normally 30-40 day long sea routes and avoiding bottlenecks in Northwestern European logistical hubs. Such “Silk Roads” provide economic and geopolitical benefits for the states they cross.¹⁸ Małaszewicze in Poland, Čierna nad Tisou in Slovakia and Záhony in Hungary are now concurrent gauge-changing facilities located between the different rail track systems of the former Soviet territories and the standard European railroad network [Interreg, 2014].

Since April 2013, there has been a direct rail freight service linking Łódź and the Chinese city of Chengdu through Belarus, Russia and Kazakhstan. Such connection makes the Polish railway network an increasingly competitive transportation alternative to the existing Eurasian ocean lanes or air routes especially after the Russian-Ukrainian conflict broke compromising the

¹⁸ The roughly 10,000km distance between Beijing and the German port city of Hamburg may be covered in 15 days by train through Mongolia (or Kazakhstan), Russia, Belarus and Poland, as opposed to an average maritime trip of 30 days [Farkas et al., 2016: 4-8].

rail traffic routes passing through instable East Ukrainian territories towards gauge-changing facilities in Slovakia or Hungary. Warsaw decided to increase the level of investments on railway lines heading towards Belarus. Goods arriving from EU ports and intermodal freight terminals via TEN-T corridors can be distributed in Polish logistical centers and forwarded towards Far Eastern destinations as the country is located in the crossroads of the Baltic-Adriatic and the North Sea-Baltic corridors [Chan, 2017]. Shipments from Ukraine occupy the leading position (42.5%) in the total commercial freight traffic of the Slovak national cargo railway company ŽSSK. East Slovakian transshipment yards and freight stations at Maťovce and Čierna nad Tisou have direct connections with broad-gauge lines to the former Soviet country. The major current goal of Bratislava is to increase the volume of transit shipments along the Rhine-Danube, the Orient/East-Med and the Baltic-Adriatic corridors amid transit deliveries mainly from Russia to Austria and the Czech Republic. Slovakia became one of the most important countries in transit transportation of commercial cargo from Russia through Ukraine.¹⁹ Slovakia is also a partner in constructing of a Moscow–Kyiv–Bratislava–Vienna direct broad-gauge railway network [Rácz, 2015]. Hungary has three main logistic centers of international significance. The Integrated Logistical Centre of Budapest (“BILK”) is situated at the crossing points of a number of trans-European corridors, the Bratislava–Győr axis is a gateway for large automotive companies, and the logistic site of Záhony is used for transferring goods from Russia and the Far East towards Western Europe [Interreg, 2014]. The country is less dependent on cargo shipments from Ukraine and Russia than Slovakia. The binary Záhony–Chop international rail junction developed during the COMECON (Council for Mutual Economic Assistance) era is the main rival of Slovakian border stations in freight traffic from post-Soviet Countries and the Far East. The predominantly smooth terrain of the Great Hungarian Plain made transportation on this route less expensive than through the relatively hilly Slovakia, while the higher density and better connectivity of the Hungarian railway system with the neighboring countries also contributed to the preferential status of the Hungarian railways for Soviet foreign trade with CEE countries. However, nowadays the Russian Railways (*Российские железные дороги*, РЖД / “RZD”) predominantly opts for using the Slovakian railway infrastructure when sending cargo shipments towards European destinations, which causes substantial reductions in the volumes of east-west cargo transit in Hungary resulting in a significant drop in the revenues from the international freight traffic’s access fees [Savchuk, 2014: 171-172]. On the other hand, as mentioned above, Western European and Chinese trans-Siberian shipments recently tend to use the Kazakhstan-Russia-Belarus-Poland route as opposed to the Kazakhstan-Russia-Ukraine-Hungary/Slovakia corridor. Having said that, in October 2017, the Hungarian government announced that rail infrastructure was essential in implementing the country’s foreign trade strategy and that the growing trade figures had to be consolidated by further developing the transport infrastructure [visegradgroup.eu/MTI, 2017]. To this end, a direct freight train service between Budapest and the Chinese city of Changsha was launched in November 2017 [IHO, 2017].

At last but not least, here follows a short summary of the V4 national railway undertakings’ latest economic performance. As of 2016, the Czech Railways (“ČD”) generated a turnover of

19 In 2012, Slovakia occupied the leading position among all European countries regarding the volume of Russian transit cargo passing through Ukraine (3.42 million tons) [Savchuk, 2014: 170-171].

1,231.5 million euros, which meant a 2% increase relative to the previous financial period. The Hungarian MÁV-Group's 2016 turnover was around 1,408.1 million euros (2% less than in the previous year). In 2016, the Polish PKP-Group had a turnover of 540 million euros that was a significant (80%) reduction relative to the figure reported for the previous period. In 2016, the Slovakian rail passenger services provider ŽSSK generated a turnover similar to 2015 (278.9 million euros), while the national freight company ŽSSK Cargo faced a drop of 2% with its 2016 turnover (278 million euros) [CER, 2018: 44-45]. However, as far as the earnings before interest, taxes, depreciation, and amortization ("EBITDA") is concerned, for 2016, ČD had a balance of € 305 million; the MÁV-Group reported € 309.3 million; the PKP-Group's EBITDA was € 107.9 million; while ŽSSK Cargo closed a balance of € 30.7 million. The only company from the region that closed 2016 with a negative EBITDA was ŽSSK (-5.2 million euros) [CER, 2018: 44-45].

CONCLUSION

The railway systems of the Czech Republic, Hungary, Slovakia and Poland are heterogeneous as far as certain technical parameters or organizational factors are concerned, however, all of them belong to the core European network, and therefore they have a number of similar attributes too. These four countries are strengthening their bonds both politically and economically. Transport cooperation is accordingly an important area of intergovernmental policy-making as it is the common interest of Visegrad Countries to improve the CEE railroad infrastructure. For this purpose the governments concerned need each other's help to strengthen their respective lobby positions. The coordinated improvement of the transport systems amid appropriate solutions increases the attractiveness of the rail infrastructure. Consequently, the fact that all the four states concerned are net recipients of EU structural funds pushes V4 Governments to cooperate in the allocation and coordination of infrastructure development projects financed by Brussels' mechanisms. Having said that, Visegrad Countries also have slightly different strategic objectives and they have become competitors on the east-west freight transport market. Nevertheless, the increasing level of the Asia-Europe rail traffic is definitely advantageous for the whole region as far as economic growth is concerned. V4 Governments formulate common positions concerning international railway policies because their respective railroad networks are deeply integrated in the complex system of Eurasian corridors. The Visegrad Governments' endeavors to build and modernize transportation routes are leading to an intertwined dense railroad network in the CEE Region, however, the lack of sufficient intraregional railway connections within the Visegrad Area demonstrates that V4 leaders first would like to exploit better the opportunities of the Eurasian railway services, and the creation of a homogeneous Visegrad Railway Area remains a collateral benefit, a secondary priority on the table.

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