

Emerging Eurasian Continental Integration: Trade, Investment and Infrastructure

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I. Introduction

Eurasia is a massive and diverse 'supercontinent' that currently accounts for two thirds of the world's population and 60% of its gross product. The significance of Eurasia is likely to rise in the decades to come (Figure 1). This paper focuses on applied matters of emerging Eurasian economic cooperation integration, namely on trade, investment and infrastructure. Our scope of research is continental, concentrating on the emerging economic linkages on the Eurasian landmass.

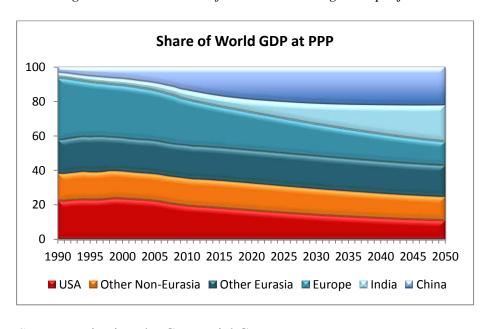


Figure 1 - Distribution of world GDP: long-term projections

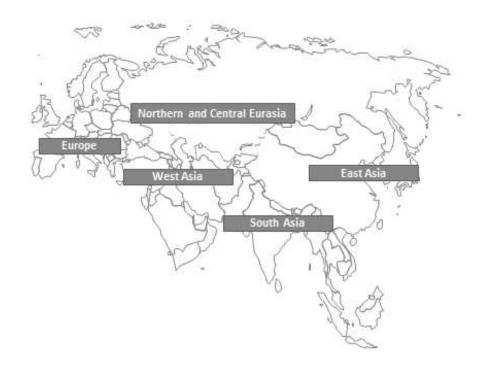
Source: projections by Centennial Group.

The level of economic, political and cultural interdependence of almost all countries is continually increasing. However this increase is not uniform: some areas of the world are more

"globalized" than others. China until the 1980s and the Soviet bloc until the end of the 1980s represented huge gaps in the web of the developing global economy. The socialist countries concentrated either on maximizing their autarchy, or on cooperating primarily within COMECON. Over the last 20 to 30 years, there has been a critical change in the spatial structure of the globalization web: the original gap in Central and Northern Eurasia seems to have been replaced by a new web connecting Europe, the former Soviet bloc and China. Before then, the Bamboo and Iron Curtains 'prevented the participation of the continent in the post-World War II globalization process, which was driven by the rapid growth of cross-oceanic links between Europe and the US and between the US and East and South East Asia'. These parts of Eurasia are now rapidly catching up, which is a particularly vivid process for the trans-Eurasian linkages. The economic network is supplemented by an increasing number of political and institutional structures incorporating the region's countries. Thus, while the European and Asian-Pacific poles of economic development in the Eurasian continent were originally clearly separated from each other geographically, the presence of Central and Northern Eurasia makes the border between them more indistinct. Russia – at least potentially – could belong to both of them. As Greater Eurasia² evolves, the opportunities and challenges of the former Soviet Union, Europe and East Asia are becoming more and more intertwined, and often coordinated policies are called for.

In our exploration of Eurasian economic cooperation we utilize a concept of five macroregions with sometimes fuzzy borders, covering the whole Eurasian landmass.³ These are 'Europe', 'Northern and Central Eurasia', 'East Asia', 'South Asia' and 'West Asia' (see Figure 2).

Figure 2 - Macroregions of Eurasia



Our analysis is centered on the 'axis' EU-FSU-China for many reasons, which are elaborated below. However, there are other players that are either currently active or can potentially become premier league players in Eurasian integration. Let us make a few country-related remarks. While most attempts to establish a 'Eurasian' regional integration project have been initiated by post-Soviet countries, particularly Russia and Kazakhstan, a recent proposal to create a 'Eurasian Union' came from the Turkish minister of foreign affairs, Ahmet Davutoglu, in spring 2010. Turkey is closely linked to the European Union, and aspires to join, but it also traditionally maintains strong ties with the post-Soviet Turkic states (Central Asia and Azerbaijan). Turkey has its own tradition of 'Avrasya' (Eurasian) thinking, which bears interesting parallels with that of Russia.

India also seems to be a potential premier league player in the emergence of linkages on the Eurasian landmass, especially in the field of trade and transport infrastructure, as we discuss further below. Currently, however, its role in the continent-wide processes is relatively small.

Importantly, the post-Soviet area in our analysis should not be treated as a proxy for Russia. Russia is indeed a key player in many regional integration projects, and an important

arena for informal linkages emerging in the region; however, other post-Soviet countries, Kazakhstan in particular, often take a pro-active role.

This paper is structured as follows. After having provided the outline of Eurasian political economy and geography in the Introduction, we move in sections II and III to the two principal domains of the paper - trade and investment. Labor migration, a potentially important integration domain, is not yet a truly pan-continental phenomenon. Then, we discuss two major constraints to the development of continental economic integration: namely asymmetry of development in section IV; and the severe deficiencies of transborder infrastructure in section V, where we cover transport, electric power, and energy infrastructure. We then proceed to brief conclusions of both positive and normative nature.

II. Trade: Filling the Long-Term Autarky Gaps

We start with a review of trade links in Eurasia. To put things in perspective, *Table 1* represents the destination-origin matrix for global exports in the mid-20th century, while *Table 2* provides comparable data for 2009. We look at seven regions specifically: North America, Latin America, Continental Europe and the UK, Eastern Europe and the USSR, Middle East, South Asia (India, Burma, Sri Lanka and Pakistan), and East Asia. The list is not entirely satisfactory in historical terms if one takes into account the colonial linkages of the period, and it does not cover all regions. In some senses, we have 'projected' the modern typology of world regions onto the world 50 years ago. Nevertheless, it provides us with an overall impression of how inter-regional trade has developed.

Table 1- Share of regional trade flows in world merchandise export, 1959, share (%)

Destination / Origin	World	US and Canada	Latin America	Continental Europe and the UK	Eastern Europe and the USSR	Middle East	South Asia	East Asia
World	100	100	100	100	100	100	100	100
US and Canada	20	34	49	13	1	17	20	24
Latin America	7	19	9	6	1	1	0	3
Continental Europe, UK, Ireland and Iceland	39	26	32	54	15	47	45	16
Eastern Europe								
and USSR	10	0	2	5	63	8	5	21
Middle East	4	2	1	5	2	13	7	5
South Asia	2	2	1	2	1	5	6	3
East Asia	7	9	3	2	14	7	9	14

Source: Vinokurov and Libman (2012), compilation based on COMTRADE data

Table 2 - Share of regional trade flows in world's merchandise export, 2009, share (%)

			South					
			and					
		North	Central				Middle	
Destination	World	America	America	Europe	CIS	Africa	East	Asia
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
North America	13.2	37.9	29.3	5.7	3.0	7.2	9.7	10.1
South and Central America	3.8	5.7	27.4	1.8	1.9	3.3	2.2	3.0
Europe	41.2	18.1	17.1	70.9	47.1	41.5	30.1	13.3
CIS	3.7	1.2	1.2	4.7	27.9	1.8	2.8	2.0
Africa	3.2	3.2	2.1	2.9	0.4	11.5	2.3	2.7
Middle East	5.7	3.0	1.1	1.5	1.2	8.6	20.9	11.2
Asia	29.4	31.0	21.8	12.5	18.5	26.0	32.0	57.8

Source: WTO

The situation has changed dramatically within the last 50 years (*Table 2*). Europe and North America still trade mostly with each other; but the majority of Asian countries' trade is concentrated within the Asian region. On the contrary, CIS intra-regional trade dropped from 63 to 28%, reflecting the end of economic autarky. In fact, one of the key trends of the second half of the 20th century has been the growing trade integration in Asia, ultimately resulting in production integration. This integration, unlike in Europe, has been driven much more by the market than by international agreements. The investments made by Japanese multinationals⁶ and the informal trade linkages of Chinese merchants⁷ have created a highly integrated region in East Asia. Meanwhile, the isolation of the USSR and Eastern Europe has disappeared - now the post-Soviet countries trade with Europe more than with each other, and almost as much with

Asia as with each other. In fact, the origins of the current situation could be traced to the Soviet period: the Soviet Union, and later Russia, became important energy suppliers for European countries. Europe's dominant intra-regional trade is higher than 60 years ago for two reasons probably: the development of European integration, and the collapse of the 'special links' between the UK and its overseas territories. Asia became Europe's second-largest export partner superseding the UK. Asia emerged as a strong partner for Latin America also. The Middle East also increased its trade links with non-European countries due to its oil and gas exports. Overall, the world is now much more polycentric, with Asia emerging as a strong partner for the European countries, post-Soviet space and other parts of the world.

Two of the changes influencing global trade are important in the context of this paper. Firstly, trade between Europe and China, which has sky rocketed over the last two decades; and secondly, the CIS' trade with the EU.

Exports from China to European and Eurasian countries saw an enormous increase in the 2000s. According to EU statistics, in 2010 imports from China into EU-27 totaled €282 billion, against EU exports to China of €113 billion; that is, about 20% of European imports come from China, and about 8% of European exports are directed to China. The EU ranks second in terms of imports from China (after Japan), and is China's biggest export destination (above the US). The growth in FDI has mirrored the growth in trade, with China outperforming the Central and Eastern European countries as the main center of outsourcing for European businesses. Currently the trade link between the EU and China is the most pronounced economic interconnection in the Eurasian continent.

As we discuss further below, the growth of intra-continental trade relies to a greater extent on unilateral liberalization than on international cooperation. However, this is not the case for energy trading, which seems to receive even more public attention than trade in non-energy goods. The energy trade in Eurasia is based on a huge disequilibrium in energy endowment: the resources concentrated in the Middle East, Central Asia and Siberia have to meet the growing

demand from industrializing East and Southeast Asia, and also supply the constant needs of Europe. The trade depends upon the vast network of pipelines spreading throughout the continent, especially in its western part connecting Russia and Central Asia to the EU. Thus, it is not surprising that inter-regional trade is growing almost twice as fast as intra-regional trade flows.⁸

The second area of interdependency is CIS's trade with the EU. As mentioned, the oil and gas supplied primarily by Russia to European countries is key to Europe's dominance of Russian foreign trade - Europe remains the biggest consumer of Russian energy resources. However, the EU also plays a dominant role in terms of trade in manufactured goods. In 2010 the EU accounted for 50% of Russian imports and 45% of Russian manufactured goods exports. China was Russia's second biggest trade partner (14% of imports), and third largest export partner (6% of exports). Russia is a less significant partner for the EU itself accounting for only 10% of imports and 6% of exports in 2010 according to EU official statistics. However, this means Russia still ranks as the EU's third largest trade partner - after China and the US. Thus, all three key regions of Eurasia are connected to each other in terms of trade. In many cases the true nature of this interdependence becomes apparent. Chinese economic growth is hardly possible without huge demand for manufactured goods in developed countries. Russian economic performance depends heavily upon its supply of energy resources to the EU. The latter, in turn, depends on Russian energy supplies.

An important feature of the Eurasian trade flows is that they actually grow faster than global trade. Table 3 provides the growth rates for export between three major regions of Eurasia – Asia, Europe and the CIS (with Asia also including India and the Middle East) as opposed to the world merchandize export. We have marked in bold all entries where the growth of export flows within Eurasian was faster than the growth of the global export. As one can see, growth rates higher than that of world trade are the rule rather than exception for the trade between Eurasian regions, with the only exception being the exports from Europe to Asia. As a

downside, in 2009 trade between Eurasian regions dropped more than global trade, but it was followed by a quick recovery in 2010. It is also interesting to note that the trade between Eurasian regions was typically growing faster than trade within each sub-region, with Asia being the only possible exception. Overall, while lagging behind in terms of globalization in the past, *Eurasia seems to catch up*.

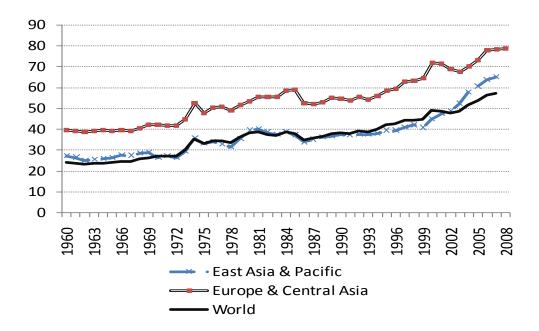
Table 3: Annual growth rates of merchandize exports, 2001-2010

Export	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total growth 2001- 2010
From Asia to Europe	-9,16	4,5%	25,1%	25,7%	15,3%	20,3%	19,5%	12,0%	-20,2%	26,0%	178,64
From Europe to Asia	-0,44	7,1%	19,2%	21,8%	7,1%	11,3%	17,6%	12,8%	-12,5%	22,4%	162,17
From CIS to Europe	-3,66	8,2%	28,1%	40,0%	39,9%	30,5%	15,9%	36,7%	-41,4%	30,3%	312,89
From Europe to CIS	29,60	15,0%	30,9%	36,4%	23,4%	30,9%	32,9%	25,9%	-38,8%	22,6%	439,64
From Asia to CIS	12,16	24,3%	63,5%	46,0%	45,9%	34,0%	60,5%	36,2%	-47,6%	48,5%	1006,75
From CIS to Asia	1,51	8,6%	24,2%	30,4%	15,6%	8,3%	29,6%	35,9%	-17,0%	34,3%	338,84
From Asia to Asia	-10,13	10,5%	21,9%	25,7%	15,0%	14,9%	15,4%	15,7%	-15,4%	33,2%	202,52
From Europe to	0,31	7,1%	20,7%	19,6%	7,7%	13,8%	16,4%	10,5%	-23,2%	10,4%	107,29
Europe											
From CIS to CIS	5,49	0,5%	28,7%	38,5%	12,3%	27,3%	29,8%	31,2%	-36,9%	28,9%	274,20
World trade, total	-4,09	4,8%	16,9%	21,6%	13,9%	15,6%	15,7%	15,3%	-22,6%	21,7%	136,40

Source: calculations based on WTO Time Series on International Trade Database

Trade openness is also higher, and rises faster, than in the world (Figure 3).

Figure 3 - Openness to trade in Eurasia



Source: World Bank, WDI database.

Note: openness is calculated as: $\left[\frac{EXP + IMP}{GDP} \times 100\right]$

With the slowdown in progress of the Doha trade talks, regional trade agreements (RTAs) proliferated. The noodle bowl phenomenon is associated with the recent boom of RTAs in Asia. It created specific costs and benefits for the region, as well as for the world economy. Recently, more and more countries have turned their attention to RTAs. Countries are taking this route because these agreements are often a more practical and feasible way to liberalize trade. RTAs can bring faster results than the multilateral process. They may enable the parties to make commitments that are more meaningful and more liberating for trade than a multilateral grouping. And very often they address issues that are not even on the multilateral agenda. RTAs can be valuable in dealing with tough issues, which often cause deadlock on the multilateral front in areas such as agricultural services.

This current trade regime in the continents contains mostly agreements with the participation of two leading regions: Europe and East Asia. Nevertheless, the spaghetti bowl of

the Eurasian continent is rapidly expanding as West Asian countries, the CIS countries, and India have joined the RTA drive.

From the beginning of this century Eurasia has seen huge growth in its international trade. Still, the share of intra-regional trade is still low for particular groupings (Figure 4). Due to its size and diversity, Eurasia trades a lot within its own continent. The main contributor is the EU as Asia's groupings and the CIS still have only very small shares of intra-regional trade.

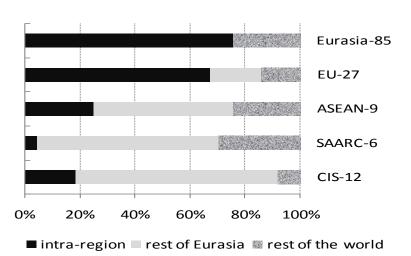


Figure 4 - Intra-regional Trade in Eurasia, 2008, %

Source: Vinokurov and Libman (2012) based on DOTS data.

Figure 5 shows the structure of trade. The structure of intra-Eurasian trade is quite diverse and balanced, with each commodity group constituting at least 5% of the total. Despite frequent misperception, *trade in mineral products takes only a minor share*. Although the highest share is held by machinery and electrical equipment (28%), followed by chemicals (13%) and mineral products (13%), the main contributor of high-skilled manufacturing trade is still the EU, both its old and new members, while textile and electrical goods are usually supplied by Chinese producers.

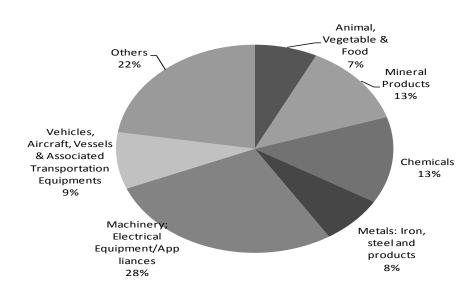


Figure 5 - Structure of intra-regional trade of Eurasia, 2009

Source: TradeMap, WTC

III. Investment: Emerging Economies' Multinationals as a New Factor

Cross-border FDIs

The change in investment flows in Eurasia is even more substantial than the change in trade flows. Less than three decades ago two large Eurasian countries, China and the USSR, were closed to foreign direct investment in almost any form and did not invest abroad themselves. From the 1990s onwards, China experienced a surge of FDI inflows, driven mostly by European companies. Russia fared worse in this respect due to its significant economic decline in the 1990s and a reduced scope for economic opportunities, but it still played a significant role. By 2008 Asian countries ranked third in terms of EU outward investment after North America and non-EU Europe including Russia. Hong Kong and Russia are among the top ten recipients of FDI from the EU; in 2007-09 investment in Russia increased by 24% and in Hong Kong by 4%, despite the crisis. Hong Kong increased its inward FDI in Europe by 56% and Russia by 11% during this period. As a substantial proportion of Chinese investment is directed through Hong Kong, this huge growth most likely reflects the increasing levels of Chinese investment in the EU.

The last decade has also witnessed the emergence of Russian and Chinese multinationals. While two decades ago Russia and China were mostly - more or less successful - beneficiaries of foreign direct investment, in the last ten years they have become important international players. For both countries the quality of statistical data on the activities of multinationals is poor. It should be noted that a large percentage of investment is being channeled through offshore jurisdictions. This is generally the reason that official statistics by national banks and UNCTAD should be treated with caution.

Let us provide a summary of the importance of sub-regions of Eurasia in the global dynamics of FDI. In the last 35 years Eurasia accounted for roughly 50-60% of the world FDI inflows, with somewhat higher share in the last two decades. Europe still consumes most of the FDI in the region. However, there is a rapid growth of FDI in the Eastern Asian countries - primarily China. Also, especially in recent years, transition economies of the former Socialist bloc appeared as important FDI recipients.

The dynamics of the outward FDI from the Eurasian countries actually shows a moderate increase of their share in the global FDI outflow, with Europe still being the major FDI source. While in the late 1980s developed countries of Asia - primarily Japan – played a larger role in the structure of the FDI flows, their role has decreased over time. A recent trend, however, is an increase of FDI from Eastern Asia and transition countries – Russia and China – which will be outlined below. It is therefore possible to state that Eurasian FDI from the quantitative point of view is still less important than the traditional centers of FDI flows; however, the role of Northern Eurasia and East Asia has been increasing steadily over the last decade. As the emergence of Chinese and Russian multinationals is recent, it is understandable why they still have a moderate role in the general picture of FDI flows in absolute figures.

Chinese and Russian multinationals

The exponential rise of multinationals from emerging countries is a much-discussed phenomenon. Chinese and Russian investments abroad stand out in the Eurasian context.

Chinese multinationals seem to have begun by targeting primarily the East Asian region, spreading to other regions of Eurasia and the rest of the world over time. There are, however, several distinctive features. The first wave of Chinese multinationals consisted of state-owned companies attempting to secure resources abroad. The second wave of multinationals came into existence in the early 1990s, and consisted mostly of companies with diverse ownership: public, local and private. For these companies, mainly operating in the consumer goods and electronics industries, FDI has been a logical step towards internationalization, initially by operating as a sub-contractor for a foreign partner. Nevertheless, for several decades at least, Chinese companies remained mostly regional, as did other East Asian multinationals: existing literature points out that the distance effect for these companies has been stronger than in other regions of the world. For Chinese multinationals, however, this regional focus has a very distinct feature: many of them invest heavily in the Hong Kong economy.

Hong Kong and Macau provided Chinese multinationals with a unique 'springboard'. This was absent for Russian companies, which therefore usually structured their investments through Western offshore centers, in particular through Cyprus. Hong Kong and Macau were highly liberalized jurisdictions 'at the front door' of the People's Republic, connected to mainland China by strong economic, social and cultural ties. Hong Kong has traditionally served as a gateway for foreign investors entering the Chinese market¹¹ and as an 'intermediary' station for Chinese investors in China hoping to benefit from Hong Kong's favorable treatment of foreign investments.¹² Thus, Hong Kong also forms an obvious bridge for Chinese investors going abroad - at least during the early period of Chinese internationalization.

The situation with Hong Kong, however, is more complex than it first appears: foreign companies investing through Hong Kong have been shown to receive substantial contributions

from local staff and partners.¹³ This makes analysis of the 'local focus' of Chinese FDI more difficult: what looks like local focus may merely represent the practice of round-tripping. However, even taking this issue into account, the local focus of Chinese companies seems to be plausible, given, on the one hand, their limited international experience and, on the other hand, the advantages that Chinese informal networks present in other East Asian countries, which play a substantial role in their economies, and which Chinese investors can rely upon. Overall, in the first half of the 2000s Asia attracted a solid 40-50% of Chinese FDI.¹⁴

The second region dominating the structure of China's outward FDI is somewhat less expected: 35-45% of the overall outward FDI during the first half of the 2000s was directed to Latin America. This statistic is partly misleading as Latin America includes investments in offshore zones such as the British Virgin Islands and the Cayman Islands. Latin American countries report a very modest impact of Chinese FDI. They are mostly concentrated in the resource sector (oil and minerals) in Brazil, Chile, Peru and Venezuela. In Mexico Chinese investors are present in the manufacturing sector. But although the share of Chinese FDI going to Latin America is large, its absolute volume is much smaller than FDI from the United States the 'traditional' provider of capital for the Latin American region. This again is somewhat similar to the situation with Russian investment in Europe. China's main impact on Latin America is related more to the fact that China attracts some of the FDI that would otherwise go to Latin American countries, but not through direct investment. In 2005, for example, 81 per cent of the total outward FDI of China was made in tax havens abroad, which makes our knowledge of the distribution of FDI much less reliable.

In addition to investments in East Asia and to a lesser extent in Latin America, in recent years Chinese multinationals have invested increasingly in Africa and Europe. The business expansion of Chinese companies to Africa has attracted a lot of attention recently. ¹⁸ Chinese companies, with strong support from the national government, have invested heavily in the African economy, mostly in order to obtain control of natural resources in the region. The second

element of this expansion, which is also more relevant for this paper, is the Europeanization of Chinese companies, that is, their access to European markets. Unlike Russian businesses, Chinese companies have not viewed Europe as the 'natural' direction for their internationalization, yet they have consistently increased their presence in the EU in the last few years.

Turning to Russian multinationals, the empirical evidence on the evolution of Russian FDI after the collapse of the Soviet Union is fragmented. However, available evidence suggests there is a certain pattern to Russian FDI. Russian investments are concentrated primarily within two regions: the post-Soviet area and European countries. The reasons why these two parts of the world are important for Russian FDI are clear. The FSU offered geographical proximity, common cultural and historical heritage, a high level of economic interdependence and common language, creating natural advantages for Russian businesses. The EU, on the other hand, constitutes an extremely attractive market and is the key trade partner for Russia - much more important than the FSU. An 'intermediate' region of Central and Eastern Europe provides a certain combination of these advantages, which are, however, less pronounced than in both other sub-regions. There is a shared-past phenomenon, but less so than in the FSU - the market is attractive, but less so than EU-15.

In the second half of the 2000s, Russian companies expanded the geographical scope of their activity, moving outside the original Europe-FSU region. In particular, raw material companies acquired assets in Africa, America and the Middle East. Russian steel companies were particularly active in this regard, buying during the pre-crisis highs (2007-08). The mobile telephony service providers also increased the scope of their FDI, acquiring assets in India and Turkey. Furthermore, Russian companies substantially changed the nature of their acquisitions. As the availability of attractive assets in the FSU decreased, Russian businesses increasingly turned to green-field investments.

Overall, it would appear that after the temporary decline during the economic crisis, Russian companies will continue to expand into traditional regions - CIS and Europe - and other regions of the world. For now, Russian business is mostly regional; but the relevant region is not restricted to the FSU, but rather to the FSU and European countries including the CEE and Western Balkan states.

Russian and Chinese multinationals are not the only group of emerging 'Eurasian' multinational companies. We have already mentioned Kazakhstan, Ukraine, and 'ethnic Chinese' from Southeast Asia. This list could certainly be expanded to include India. Indian multinationals are very interesting in that they are much less regional in terms of their FDI, being present in equal measure in Europe and North America and to a slightly lesser extent in Asia. This unusual feature may be explained by aspects of Indian history. It is a country where the knowledge of English is very widespread, and links to Europe and the US are more established than for Russia and China. This is particularly with regard to top management staff, who are very often educated in the developed world. Russia and China have until recently been effectively closed from the rest of the world. After the demise of the "License Raj" (the burdensome Indian bureaucracy stifling market forces) in the early 1990s the liberalized Indian economy became a centre of further growth. So it is safe to say that Eurasia is transforming itself from a 'recipient' region with its FDI focused in Europe - competing with US companies - into a continent with multiple centers of competing multinationals.

IV. Constraint 1: Asymmetry of Development and Size

There are a number of political, economic, institutional, and geographic constraints to the emerging continental integration. In this paper we will focus on two major constraints of an economic nature.

The first constraint is the economic asymmetry of the continent. Essentially, the central part of the continent lags in terms of overall economic development behind the western and

eastern parts. This problem of asymmetry is illustrated well in the work done by the World Bank and represented in Figure 6. We call the ensuing image the 'Eurasian Dumbbell'. The economic geography of Eurasia - represented according to national GDP - shows that wealth distribution does not relate to the physical reality of the continent. In other words, since the cartogram demonstrates countries' economic weight, Northern and Central Eurasia is clearly the 'weak spot' on the Eurasian economic map; it has remained so despite its rapid growth in the 2000s. It is joined in this regard by India despite rapid growth in the 2000s, and West Asia despite oil and gas riches.

Figure 6 - The 'Eurasian Dumbbell'

Source: World Bank (2009).

Note: the cartogram shows the countries that have the most wealth when GDP is compared using currency exchange rates.

Figure 6 illustrates the major constraint for transcontinental trade and investment in Eurasia, namely the fact that Northern and Central Eurasia, West Asia and India are vast but relatively insignificant economic regions lying between two economic centers of power, the EU and East Asia – which includes China, Japan, and South Korea.

Emerging Eurasian integration is likely to alleviate strong economic asymmetries existing in the heart of the continent. Infrastructural development is crucial to achieve that goal. For now,

however, transborder infrastructure represents a major impediment to trade and investment on its own.

The economic asymmetry is exacerbated by various facets of political asymmetry. Lying outside of the scope of this paper, they are still worth mentioning. To name a few, formal intergovernmental cooperation faces difficulties concerning the interaction between large and small states as well as between democracies and autocracies.

V. Constraint 2: Drawbacks of Cross-Border Infrastructure

The huge continental landmass of Eurasia, combined with in many cases highly underdeveloped infrastructure networks, makes transborder and transcontinental infrastructure a priority for any further development of international economic linkages. To illustrate this point, we will briefly touch upon railway transportation including high-speed rail, electric power infrastructure, and energy infrastructure.²¹

Transcontinental Transport Infrastructure

We begin with transport. The huge volume of trade between Asia and Europe is predominantly in finished goods, which account for over 90% of the total. This means that practically all exports are containerized and shipped to Europe by sea. ²² Shipment by sea has the advantages of simplified procedures, uniform waybills, and the opportunity to track the movement of cargo. Maritime transportation also promotes greater stability and transparency of tariffs. The drawbacks of maritime transportation are few and insignificant in relative numbers; they include the recent rise of piracy in the Indian Ocean and Malacca Straights.

Land routes can serve as a partial alternative to sea transport. If properly developed and managed, they possess several advantages. In terms of linking Europe and Asia, the rail distance is almost half that of the sea route. For example, freight shipped by rail from Lianyungang to Berlin takes 11 days, and by sea takes 20-30 days. Nevertheless, until now, overland routes have

been used almost exclusively for trade between inland areas of the post-Soviet region: China, Mongolia and South Asia. China's main shipping centers are in the south of the country: the Pearl River delta, and the Shanghai region. Opportunities to increase container transportation from these regions to the FSU countries are extremely limited. This problem affects backhaul loading: FSU exports to China are such that there is almost nothing that can go by container. Metallurgical goods are no longer an export option, as China has itself become an exporter of these goods.

India's foreign trade has been expanding considerably over the last few years with an annual increase in exports of around 19% since 2000. In 2008, India earned \$43 billion from exports to the EU, and almost \$3 billion from exports to Northern and Central Eurasia. The totals were \$12 billion and \$0.7 billion respectively in 2000. This growth in exports may persuade Indian and South Asian shippers to use the India-Iran-Russia-Europe route, which is potentially quicker than the main alternative. This would involve, first, transit through Pakistan and, second, finalizing construction of the Kazakhstan-Turkmenistan-Iran railroad along the Caspian Sea, currently under construction. Analysts predict that delivery time using the North-South Corridor will be reduced by anywhere from 10–20 days, and that the cost per container will decrease by \$400-500.

Meanwhile, notwithstanding the North-South ITC Agreement of September 2000, freight forwarders are showing little interest in the proposed new routes. Small shipments of tea and tobacco made their way to Russia from India through Iran for the first time in 2000. In 2007 the Caspian port of Olya, which has been assigned a key role in servicing the North-South ITC's cargo flow, shipped only 435 thousand tons through its terminals. When the ITC Agreement was signed in 2000, Olya was expected to be handling 3 million tons annually within five years. The North-South route's potential is still unrealized.

In general, the vast transit potential of the post-Soviet countries is, at present, very much underused. In quantitative terms, the current and potential transit cargo flows of non-CIS

countries are negligible compared with transit from and through Northern and Central Eurasia to other countries. Analysis of Eurasian cargo flows and the load on inland freight transit systems should focus on the three major cargo centers of China, South Korea and India. China and South Korea are Europe's main partners in East Asia. They are already using, and need to increase, their freight transportation through Central Asia. India is a source of freight that could potentially be transported to Europe along north-south routes. Southern and eastern China will always prefer sea and air transport to send goods to the EU and countries of Northern and Central Eurasia. The most obvious area to develop in order to expand shipment along land corridors is western China: home to 150 million people and burgeoning industry. Commodities which can be transported by road and rail from China to Kazakhstan and Russia include: chemicals (hazardous); foodstuffs (perishable); electrical equipment (TV, video and audio systems); mobile communications equipment; electric cables; furniture; clothes and shoes; and cosmetics. Commodities that could potentially be transported by road on the backhaul from Europe to China include: industrial and agricultural equipment; metals (high-value, non-ferrous metal goods, high-purity metals and other high-value goods which are usually purchased in small quantities); integrated circuits; various fine chemical products and polymers; consumer goods; and foodstuffs (for example, meat). Some cargoes, such as bearings, are not suitable for sea transportation without expensive specialized packaging to protect them from the sea air. Thus, there are several niche markets for China-EU traffic through Northern Eurasian land corridors, with rail transport offering competitive tariffs and delivery times for an intermediate category of high-value and low-weight goods. The highest-value/lowest-weight goods tend to be sent by air freight.

The different rail gauges in Eurasia is one of the major impediments to growing transit and trade (see Figure 7). 60% of the world's railways use a standard gauge of 1435mm (4'8.5"). On the Eurasian continent, the rail network is more fragmented that the world's average. When there is a break of gauge as railway lines meet, this adds cost and inconvenience as traffic passes

from one system to another. The Trans-Mongolian Railway is a good example of this problem: Russia and Mongolia use a broad 1520mm gauge whereas China uses the standard gauge. At the border, carriages have to be lifted one at a time and put on new bogies. The whole operation can take several hours. This issue also affects the Ukraine-Slovakia border on the Bratislava-Lviv train, and the Romania-Moldova border on the Chisinau-Bucharest train. This can be avoided by implementing a system similar to that used in Australia, where some lines between states using different gauges were converted to dual gauge with three rails, two forming a standard gauge line, with the third rail either inside or outside these to form either a narrower or broader gauge. As a result, trains built to either gauge can use the line.



Figure 7 - Eight types of railway gauges used in Eurasia

Source: Vinokurov and Libman (2012), based on various sources. All 15 republics of the former Soviet Union + Mongolia + Afghanistan (+ several connections to Finland) are part of the '1520 space'. Spain has various types of rail gauges, including both the standard 1435mm and a narrower one. See also Wikipedia article on world's rail gauges. Available at: http://en.wikipedia.org/wiki/File:Rail gauge world.svg, as of July 2013.

The latest practical development involves Russia and – do not be surprised! – North Korea. These countries have almost completed a reconstruction of the railroad Khasan-Radjin. This is a 54-km long line from the Russian border to the port of Radjin where a 4 million tons cargo terminal is also being built. The railway features 1520-1435 gauges with three rails - the 'Australian' option discussed above. Presumably, the South Korean Pusan can become the end destination of this railroad in the future²³. The idea is very 'Eurasian', namely to attract cargo from Asia-Pacific to be transported via the Trans-Siberian railroad to the CIS countries and Europe.

Land routes have other physical and non-physical disadvantages. Physical barriers include: the obsolescence and shortage of rail cars, containers and locomotives; existing infrastructure and technology do not comply with international quality standards (route handling capacities and so on); there is inadequate, inefficient and/or corrupt processing capacity at border crossing points (see Table 4); logistics and communications networks and motorway service facilities are poorly developed; rail gauges differ. Non-physical barriers are largely man-made, non-technical barriers to trade, such as protracted customs procedures at border crossing points, which significantly increase waiting times for vehicles and rolling stock. These include: random inspections, often requiring sealed transit containers to be opened; non-harmonized transit tariffs across Northern and Central Eurasia; and rules which differ from country to country.

Table 4 - Physical and non-physical barriers to trade with Europe

Shipping point	Route	Distance,	Number of	Number
		km	border	of bogie
			crossing	crossing
			points	points
Lianyungang	Via Kazakhstan and Russia	9,200	4	2
(China)				
Shenzhen	Via Mongolia and Russia	11,040	4	2
(China)	Via Kazakhstan and Russia	10,300	4	2
The	Via China, Mongolia and Russia	8,900	4	2
Tumannaya	Via China, Kazakhstan and Russia	9,900	4	2
River	Via China (Manchuria) and Russia	9,000	3	2
	Via Russia	10,300	2	1
Nakhodka	Via Russia	10,300	2	1

(Russia)				
Rajin (North	Via China (Manchuria) and Russia	8,900	4	2
Korea)	Via Russia	10,300	3	1
Busan (South	Via North Korea and Russia	11,600	4	2
Korea)	Via North Korea, China, Mongolia	10,780	6	2
	and Russia			

Source: UNESCAP (1996). Berlin has been taken as a reference point for Europe.

Non-physical barriers

Non-physical barriers are the greatest impediment to the expansion of transit operations in the Eurasian region, as they result in long delivery delays. Delays not only cost the operators money, and the trust of their customers, they also erode the main competitive advantage land transit has over sea transit. A number of studies provide quantified arguments for this statement. The Time/Cost-Distance (TCD) methodology by UNESCAP has been applied to a number of important routes throughout the region. For example, a study of goods shipped from Bishkek, Kyrgyzstan, through Kazakhstan to Novosibirsk, Russia, revealed that 65 hours of the total 207 hours required for the trip (or 31%) was spent on the Kyrgyz-Kazakh border while 57 hours were spent stuck on the Kazakh-Russian border (31%).²⁵ Thus, more than 60% of the trip time was thus spent at two border crossings, which accounted for 64% of the overall cost.²⁶

The UNDP Central Asia Human Development Report quantified the significance of non-tariff barriers in terms of cost and time. It estimates that time and cost of transport from Europe to Central Asia could be cut in half if "standard" border crossing and transit conditions applied. An interesting finding of this study is that both duration and cost of transport can be cut drastically thus making feasible the introduction of a new nomenclature of goods.

There are two complementary ways to eliminate physical and non-physical barriers. Firstly, state transport policies - in the form of strategy documents - should focus on the most pressing problems affecting the country's transport sector. In many cases the problems can be resolved by investing government money in transport infrastructure, reforming institutions and eliminating institutional bottlenecks. Secondly, regional organizations can address shared problems in a concerted way by prioritizing mutually beneficial co-operation and employing unified strategies. The establishment of the Belarus-Kazakhstan-Russia Customs Union is an important milestone in this regards, as the CU has already proved very successful in cutting delays on the Russian-Kazakhstani border.

Transborder infrastructure: capacity-building, technical assistance, and international financial institutions

Technical assistance projects do not receive as much attention and funding as they should. Large and capital-intensive 'hardcore' infrastructure projects are given priority. Technical assistance, which leads to the minimization of infrastructural bottlenecks, is often the domain where donors can get the highest value for money, as it needs a lot less financing than physical infrastructure investment.

This is the reason, for instance, why CAREC has a very specific focus on these issues.²⁷ In general, CAREC – a multilateral initiative led by the Asian Development Bank – is a rather unique effort by the multilateral institutions to jointly support regional infrastructure. Launched in 2001 and modeled on the example of the Greater Mekong Subregion Program, it heralded a substantial effort to support cross-border infrastructure in greater Central Asia with the cumulative volume of approved investment projects of \$13.2 bln within 10 years²⁸. CAREC's current membership comprises ten countries and six multilateral organizations.

At the same time, we should note the insufficiency of effective support for cross-border initiatives at the national level. Naturally, cross-border infrastructure tend to be of less political importance than internal infrastructure, and more cumbersome in planning and realization. There are also a number of sensitivities limiting the potential usefulness. For example at CAREC's inception, the critical area of water resource allocation and management was excluded.²⁹

Also, the degree of physical connectivity on the continent is often intertwined with matters of 'regulatory connectivity', namely, convergence on technical standards and regulations. Here it is important to set apart global, regional (EU, CU, ASEAN etc.), and continental agendas. A technocratic approach dictates a healthy degree of self-restraint, limiting the continental agenda to some sector-specific domains. To provide an example, harmonization/convergence of standards in railway transportation (packaging, technical standards for railway cars, etc.) would be a suitable subject of regulation on the continental level. This is a specifically continental domain, with no direct application on the global level. After all, a railway car will never travel from Moscow to Buenos Aires; but, one day, if sector-specific technical standards and border crossing solutions evolve in the right direction, it might regularly go to Xian or Tehran.

Transcontinental container trains? Transcontinental high-speed trains?

In the transcontinental context, the idea of the China-Europe high-speed railway (HSR) deserves a comment. This hugely ambitious initiative was proposed by China in 2009. The line would supposedly run from Beijing to London and take just two days. Taking the expanding Chinese rail network as the starting point, new 200mph lines would extend south towards Singapore, north and west into Siberia and west through India, Kazakhstan, and Turkey, with the eventual goal of linking into the European high-speed train system. Although exact routes

are not yet determined, Chinese authorities have entered negotiations with 17 countries over the rail lines.

There are reasons to be skeptical. Railways love stability. A 10000-km high-speed rail through several countries, some of them politically unstable or in the state of strained relations with each other - this concern is particularly relevant for the southern route - seems to face gigantic risks both in construction and in operation. There is also limited economic rationale. First, trans-continental passenger traffic makes little sense, except for a new luxurious Eastern Express, as the population density and purchasing power throughout Eurasia is too small to support the economics of high-speed passenger transportation. With respect to cargo transportation, there is a relatively small nomenclature of perishable goods, and also goods with a high cost-to-weight ratio, to consider. The question also remains whether it would suffice to support the ensuing high tariffs. It is worth remembering that both sunk costs and operation costs would be enormous.

Nevertheless, this idea should not be written off. The northern route in particular may become reality within 20 years. The prerequisite to the successful completion is the willingness of states to finance large-scale HSR projects on their territory. A Northern trans-continental high-speed railway may come to existence if: China constructs a link to Urumqi; and Russia constructs a link from Moscow to Ekaterinburg – the Moscow-Kazan link should be completed by 2018 to ensure transportation of the World Cup visitors; and Kazakhstan builds the Astana-Almaty line, which it intends to do. History of the future is written by optimists.

Meanwhile, the Trans-Siberian Railway network, which spans Russia from Moscow to Vladivostok, already offers a container service as an alternative to ocean shipping - although the volumes are small. The container train from Shengyang to Leipzig is used by both Chinese and European companies for the transportation of complex machinery. Yet another goods nomenclature was brought by the first Zhengzhou-Hamburg container train in August 2013. Its

51 container wagons were filled with clothes, shoes, and tires. The 10,215 kilometer run took 15 days – approximately three times less that the sea-borne transportation.³⁰

Common electric power markets

The development of common electric power markets (CPMs) across Eurasia would allow for greater trade in electric power - a commodity with huge trade potential on its own. It would also engender significant synergies both in price and stability of power supplies.

We do not think that a unified and homogenous common power market stretching from Lisbon to Vladivostok and Shanghai will become a reality any time soon. Neither do we think that it should be viewed as a top priority. However, opportunities may arise to create a number of regional and sub-regional common markets based on the development of infrastructure to generate and transmit electricity. Any Eurasian CPM would develop gradually within the parameters established in bi- and multilateral agreements. The EU, China, India and Iran are all potential key partners for the countries of Northern and Central Eurasia in the creation of Eurasian CPMs. Specific integration projects in particular sectors are able to promote genuine economic and political progress. Regional economic integration that begins in key sectors may then expand to the level of institutional integration. The strong economic rationale of common power markets makes them extremely valuable integration projects.

The establishment of regional and sub-regional energy markets (or 'pools') is at the top of the economic agenda in many regions of the world: the EU, North America, South America, the CIS, and Southeast Asia, for example. Setting up a CPM is not dependent upon levels of economic development. On the contrary, a CPM is considered to be one of the strongest foundations of sustainable economic growth and regional economic integration. African nations, for example, have made strenuous efforts to create integrated markets, namely under the SADC (Southern African Power Pool, which started in 1985) and under ECOWAS (West African Power Pool). The cost of the latter is estimated to be \$15 billion. The vital prerequisites for the

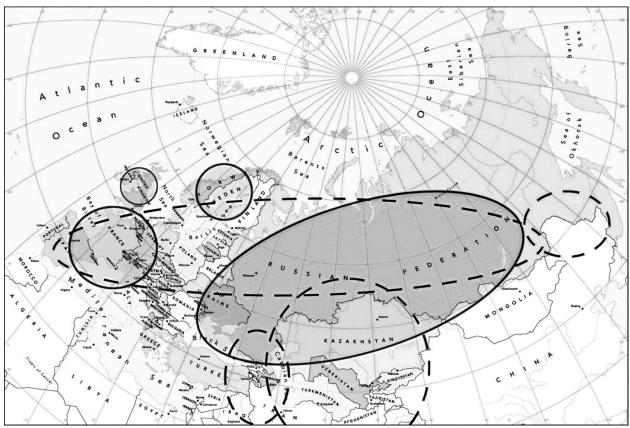
creation of a CPM are not only significant investment, but also the establishment of harmonized legal frameworks.³¹ The most advanced sub-regional market today is NordPool, which unites the Scandinavian countries. Northern Europe's regional electricity market was liberalized and integrated almost 15 years ago, and today it serves in many respects as a model for other European regional markets and for the CIS.

The economic logic of a CPM is linear: the greater the area and the more heterogeneous the sources of power it incorporates, the better. A CPM, therefore, would seem to benefit from the geographical expansion of the area it covers. The following cross—border initiatives are of particular interest in greater Eurasia:

- Connection between Azerbaijan and Iran
- Connection between Armenia and Iran; Turkmenistan and Uzbekistan connected to Iran,
 Afghanistan, Pakistan and other South Asian countries;
- Kyrgyzstan and Tajikistan cooperating with China, Iran, India in developing hydro-electric potential; exporting electricity to Pakistan, India, Iran, China, Afghanistan and CIS countries;³²
- Russia-China connection wherein Russia would build coal-powered plants on its territory
 and provide power to the Chinese network. A gigantic project in being mulled upon in
 Eastern Siberia, which includes developing coal-fired generation and building transmission
 lines to China. It may ultimately export as much as 60 billion kWh annually;
- Connecting the regional energy system with that of the EU, with a view to creating a common market from Lisbon to Vladivostok. This project would be hugely significant for Russia, Ukraine, Belarus and Moldova;
- Mekong, the 'Battery of Asia;
- Various connections between China and its Eastern Asian neighbors, in particular in Mekong basin.

This list is certainly incomplete. Figure 8 below depicts existing regional and sub-regional CPMs in Eurasian (red circles) and some potential CPMs (blue circles). Meanwhile, the current developments are a mixed bag. Importantly, the Central Asian common power grid, an efficient and properly managed component of the Soviet heritage, was discontinued in 2009 due to the withdrawal of Uzbekistan. This represents a big step backwards for the region in terms of physical connectivity and economic efficiency of electric power production and distribution.

Figure 8 - Existing and potential regional and sub-regional electric energy markets in Northern and Central Eurasia



Source: Vinokurov (2008).

Any Eurasian CPM would develop gradually and be based in a number of bi- and multilateral agreements. In our incomplete list we mostly concentrate on the prospective regional and sub-regional power markets that may lie in Northern and Central Eurasia along the EU-FSU-China axis. Certainly, a complete list of Eurasian CPMs would include a number of areas in South and East Asia, for example, the Mekong River Basin has a long history of

cooperation uniting Cambodia, Laos, Thailand and Vietnam. In 1995, the Mekong River Basin Treaty was signed between these four Lower Mekong states. The Mekong River Commission was created and China and Myanmar became Dialogue Partners. With guidance and financing from the ADB and the World Bank a number of international dams and power stations have been built with a total capacity of more than 3GW. The estimated hydroelectric potential of the lower Mekong Basin is in excess of 30GW, and that of the upper Mekong Basin almost 29GW. The nickname 'Asian battery' is therefore potentially justified. Nevertheless the subject is a focus of ecological debate, since the environmental effects, and potential damage to people's livelihoods of such developments, are fervently disputed. The shared development of hydropower capacity and water utilization could naturally lead to a common regional power market.

The number of parallels between the Greater Mekong Basin and Tajik/Kyrgyz hydroelectricity potential is striking. Firstly, these sub-regions' power potential is huge in both absolute and relative terms; they are indeed two prospective 'Asian batteries', one for South-East Asia and another for Central Asia. Secondly, this potential is hugely under-utilized, largely due to intergovernmental conflicts. Thirdly, the lives of millions of people literally depend on water and irrigated agriculture in the respective regions. Fourthly, several large national and multilateral development banks are closely involved. There is a difference, though. Mekong Basin is currently successful in managing peaceful coexistence - whereas there is an ongoing conflict between Tajikistan and Uzbekistan, which stands in the way of any concerted international efforts.

Close multilateral cooperation is therefore essential if viable solutions are to be found. This cooperation would involve: countries within and outside the region; the development institutions providing the financing and technical assistance; local communities; and civil society and at least the elements of a common power market.³³

Central Eurasian regions of Central Asia, Caucasus, and Western Siberia are a vital source of the world's hydrocarbons. These suppliers are all based in the middle of the supercontinent; unlike the Gulf States, they do not enjoy an immediate proximity to sea. They must rely on land-based oil and gas pipelines, making this kind of infrastructure vital both for them but also for the EU and China. Moreover, pipeline construction is a huge business in itself. Major worldwide investments in pipelines amount to ca. \$40 billion every year.

U.S. strategic interests in linking the nations of the Caucasus and Central Asia with European and global markets are also clearly recognized. "Energy is the economic lifeblood of many NATO allies and partners in the Europe and Eurasia region, and dependence on Russia and Iran for energy imports or exports remains a central detriment to those nations' sovereign independence..."³⁴ The U.S. now supports numerous oil and gas pipelines in the region. The policy of U.S. support and successful political brinkmanship bore fruit in the form of the completed BTC oil pipeline and the SCP gas pipeline from Azerbaijan to Turkey.

Two decades after the dissolution of the Soviet Union, and particularly the developments of the 2000s, have led to a drastic change of landscape concerning oil and gas exports from Central Eurasia. Only 20 years ago all infrastructure of Western and Eastern Siberia, Central Asia and Azerbaijan passed through Russia in the western direction. One of the analysts says in this regards the economic fundamentals of cross-border energy transit in Eurasia are 'muddled by the Soviet legacy'. ³⁵This is perhaps a wrong way to perceive the economic reality. Rather, the century-long legacy and the sunk costs were so entrenched that it formed an essential part of the economic fundamentals of oil and gas flows.

Things change, however. It became particularly vivid on December 14, 2009; the Presidents of China, Turkmenistan, Kazakhstan, and Uzbekistan met in the remote corner of Turkmenistan to inaugurate a 1,800-km gas pipeline to China. Its capacity already exceeds 30 billion cubic meters (bcm), and may reach 60 bcm when the second thread is completed. The

2000s witnessed a number of other large pipeline projects successfully brought to completion: leading both in the western direction (Turkey, EU), in the southern direction to Iran and, most importantly in terms of volumes, in the eastern direction to China. These developments were coupled with massive upstream investments by both the international majors (Chevron, ExxonMobil, BP, etc.) and Chinese CNPC. China was particularly efficient in using the 2008-09 global crisis to enter the upstream markets.

The further development of China's energy strategy comprises a plan to build a China-Arab line to the Persian Gulf oil terminals through Central Asia. If successful, this trans-Eurasian project will not only improve the energy security of China, but also strengthen Beijing's broader geo-political influence in the region.³⁶

Table 5 - Gas and oil pipelines from Central Asia and Caucasus constructed over the last decade

Gas transit	Oil transit
Blue Stream (16 bcm)	Baku-Supsa (885 km)
South Caucasus gas pipeline (8.8 bcm,	Caspian Pipeline Consortium (1,500 km,
expansion to 20 bcm)	\$2.6 bln cost)
Turkmenistan-China (40 bcm, expansion	Baku-Tbilisi-Ceyhan (BTS) (1,780 km,
up to 60 bcm)	\$4.2 bln cost)
Turkmenistan-Iran (8 bcm)	Kazakhstan-China (987 km)
Kazakhstan-China (Zaysan-XUAR, 2013;	
1.5 bcm)	

Changes are not confined to Central Asia and the Caucasus, as Russia is also in the process of significantly altering its export priorities. As the European market is stagnating, efforts are being made to establish sizeable export from new Eastern Siberia oil and gas fields to

East Asia through three channels: first, direct land-based deliveries to China; second, the combination of an oil pipeline and seaborne delivery to Asia through the port of Skovorodino; third, LNG deliveries from Sakhalin, primarily to Japan and South Korea.

VI. Conclusions

The aim of this paper was to review the dramatic changes in the structure of economic linkages in the Eurasian continent. Until the 1990s Eurasia was split into competing and isolated countries and political blocs, which often had very limited connections to the world market, and most importantly to COMECON bloc and China. Now, the web of links between Europe, Northern and Central Eurasia, and East and Southeast Asia is growing continuously. This is particularly visible with regard to trade. It is also visible in investment, where Eurasia is not only more integrated, but is also more multi-polar than it was decades ago, as Chinese and Russian multinationals are now big players in the world economy.

Emerging pervasive cooperation in the Eurasian landmass is primarily a bottom-up story, with intergovernmental cooperation lagging behind the rapid developments on the micro-level of companies and people. Since Eurasian linkages are highly dependent on the development of common infrastructure, there has recently been a great deal of activity in this field. Still, the cross-border railway and automotive infrastructure and electric power linkages in particular remain hugely underdeveloped. The development of cross-border infrastructure linking the continents and providing its core with efficient linkages to the main trade partners would do much to unleash the positive effects of mutual trade and investment in Greater Eurasia.

On the normative side of the evolving Eurasian story, therefore, there is a need for a deliberately low-key, pragmatic and technocratic agenda. As we highlighted in the paper, institutional integration faces numerous hurdles in Greater Eurasia: the asymmetry of size, the level of development, and political regimes. These hurdles are unlikely to be overcome in the coming decades. Structuring cooperation according to a functional principle and concentrating on such domains as physical infrastructure and some sector-specific and continent-relevant

elements of regulatory convergence is crucial. Functional cooperation in counteracting continent-wide issues of 'shadow integration', ranging from drug-trafficking to epidemiological threats, is also promising. It will assist the move forward in a quiet and constructive manner.

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Endnotes

¹ Linn (2011: 5). See also Linn and Tiomkin (2006).

² The term ,Greater Eurasia' has been recently introduced by Michael Emerson in Emerson (2013).

³ See two monographs: Vinokurov and Libman (2012) on Eurasian integration and Libman and Vinokurov (2012) on the application of Eurasian continental issues to the post-Soviet space.

⁴ http://rinsider.club-feroviar.ro/en/afiseaza stire.php?id=5859

⁵ Vinokurov and Libman (2012: 88-90)

⁶ Kimura (1998); Tachiki (2005)

⁷ Peng (2000, 2002)

⁸ Linn (2007).

⁹ All data from Eurostat

¹⁰ Gao (2005)

¹¹ Dobson and Yue (1997)

- ¹² Breslin (2004a, 2004b)
- ¹³ Low et al. (1996)
- ¹⁴ Kolstad and Wiig (2009)
- ¹⁵ Jenkins et al. (2008)
- ¹⁶ Garcia-Herrero and Santabarbara (2007)
- ¹⁷ Cheng and Ma (2007)
- ¹⁸ Broadman (2007)
- ¹⁹ Kuznetsov (2010)
- ²⁰ Sethi (2009)
- We leave aside other important and extremely promising spheres, such as telecommunications. See Vinokurov and Libman (2012) for analysis.
- ²² Vinokurov et al. (2009)
- ²³ http://www.1prime.ru/transport/20130613/764095535.html, June 13, 2013.
- More on non-physical barriers see Vinokurov et al (2009)
- ²⁵ This particular delay has been eliminated by the establishment of the Belarus-Kazakhstan-Russia Customs Union in 2011.
- ²⁶ UNECE-UNESCAP data, cited in Starr and Kuchins 2010.
- ²⁷ There is a growing body of applied research on the matters of extending transport corridors in East-West and North-South directions. For example, see Emerson and Vinokurov (2009) with concrete proposals for railway corridors in both directions.
- ²⁸ Linn: 2012: 109.
- ²⁹ Linn 2012: 102.
- http://www.spiegel.de/wirtschaft/unternehmen/gueterverkehr-hamburg-begruesst-den-ersten-zug-auszhengzhou-a-914567.html, accessed August 4, 2013.

 31 UNECA (2006): 15
- ³² The most recent example is an agreement signed by Pakistan, Afghanistan, Kyrgyzstan, and Tajikistan on August 4, 2008, which foresees construction of a transmission line "Central Asia - South Asia 1000" (CASA-1000) connecting Central Asia upstream countries with their South Asian neighbors by 2014.
- ³³ See also a companion paper by Michael Emerson "Towards a Greater Eurasia: who, why, what and how?" Section 4, working paper for the Emerging Markets Forum, Astana, September 2013.
- ³⁴ Committee on Foreign Relations (2012)
- ³⁵ Stulberg (2011)
- ³⁶ Fazilov and Chen (2013)