

## THE GEOPOLITICAL DETERMINANTS OF ENERGY SECURITY

Pavel BUČKA\*, Sylwia Wanda ZECHOWSKA\*\*

\*“Armed Forces Academy of gen. M. R. Štefánik, Liptovský Mikuláš, Slovakia, \*\*Matej Bel University, Banská Bystrica, Slovakia

**Abstract:** *In terms of energy security, geopolitics manifests in the dynamic and static factors of spatial distribution of energy resources, which in reality comes down to the interplay among the regional energy supply and demand centers and the manner in which the geographical contributors affect both state and non-state actors in their pursuit to achieve energy security goals. On account of the fact that the centers of supply and the centers of demand do not correlate, arises the issue of transit routes security. Yet another geopolitical determinant of energy security is closely related to the characteristics of oil and gas markets and this one is twofold; first, the oil market is global and the gas market has been since the mid 2000s developing towards its globalization too; second, crude oil and natural gas are fungible commodities, which means that they are fully exchangeable or replaceable.*

**Keywords:** *emotion management, emotional rules, organizations.*

### 1. INTRODUCTION

In its classic meaning, geopolitics can be understood to be a study of state as a phenomenon analyzed within its spatial geographic environment. From this analytical perspective, the state was considered not as a separate agent but rather as a component of a broader international system. It was Rudolph Kjellen, a Swedish lawyer and scholar who first coined the term “geopolitics” in 1899 to illustrate and explain the geographical endowment of a given state as having a decisive influence on its potential of power (Ó Tuathoil, 2006). Kjellen defined geopolitics as “*the science which conceives of the states as a geographical organism or as a phenomenon in space*” (Dodds, 2005: 28). However, geopolitics as a discipline of study was fully developed by a British geographer, Halford Mackinder and an American navy officer and strategist Alfred Thayer Mahan. Those early theorists of this intellectual field had a tendency to perceive geopolitics through the lens of geographical reasoning which reflected the states’ power to take actions on the global arena (Dodds, 2005).

Sir Halford Mackinder still occupies a prominent position among the scholars of geopolitics as a theory and policy and his unquestionable contribution to the development of geopolitical thinking is frequently attributed to the fact that his ideas to a greater or lesser extent influenced academics and politicians throughout the 20th century. Mackinder’s Pivot-Heartland theory articulates a standpoint on “*international security that transcends the challenges of a particular period*” (Gray, 2004 : 9). On the other hand, his theories were also subject to bitter criticism because of Mackinder’s follower, Karl Haushofer who paved their way into the *Lebensraum* policy of Nazi Germany (Fettweis, 2000).

Notwithstanding the shortcomings of the early geopolitical thought, the contribution of the pioneers of the method of analyzing international relations cannot be underestimated. As time showed, by means of extrapolating past events, Halford Mackinder, Nicholas Spykman, Alfred Thayer Mahan, or finally Edward Luttwak envisioned numerous future international developments like for example the creation of NATO, the end of

Cold War, or the transition of geopolitics into geo-economics (Sempa, 2009). The popularity of geopolitical thought was again brought to a revival in the late 20th century by National Security advisor and Secretary of State, Henry Kissinger with the publication of his seminal work *White House Years* (1979) in which he almost equated this concept with a realist school of thinking applied to international politics (Gray and Sloan, 2005). In Kissinger's own words "*geopolitics is an approach that pays attention to the requirements of equilibrium in international politics*" (Kissinger, 1979: 714). Interestingly,

Kissinger's approach was to a great extent compatible with the prevailing common understanding of geopolitics. In the general perception, geopolitics translates into the impact of a state's geographical position on its foreign policy as well as into the relations it has with other states; it also manifests in the strategic value of such aspects of a state's spatial location as the access to natural resources or sea lanes. In the often cited phrase coined by Napoléon Bonaparte: "*La politique d'un état est dans sa géographie*" (Mamadouh, 2009).

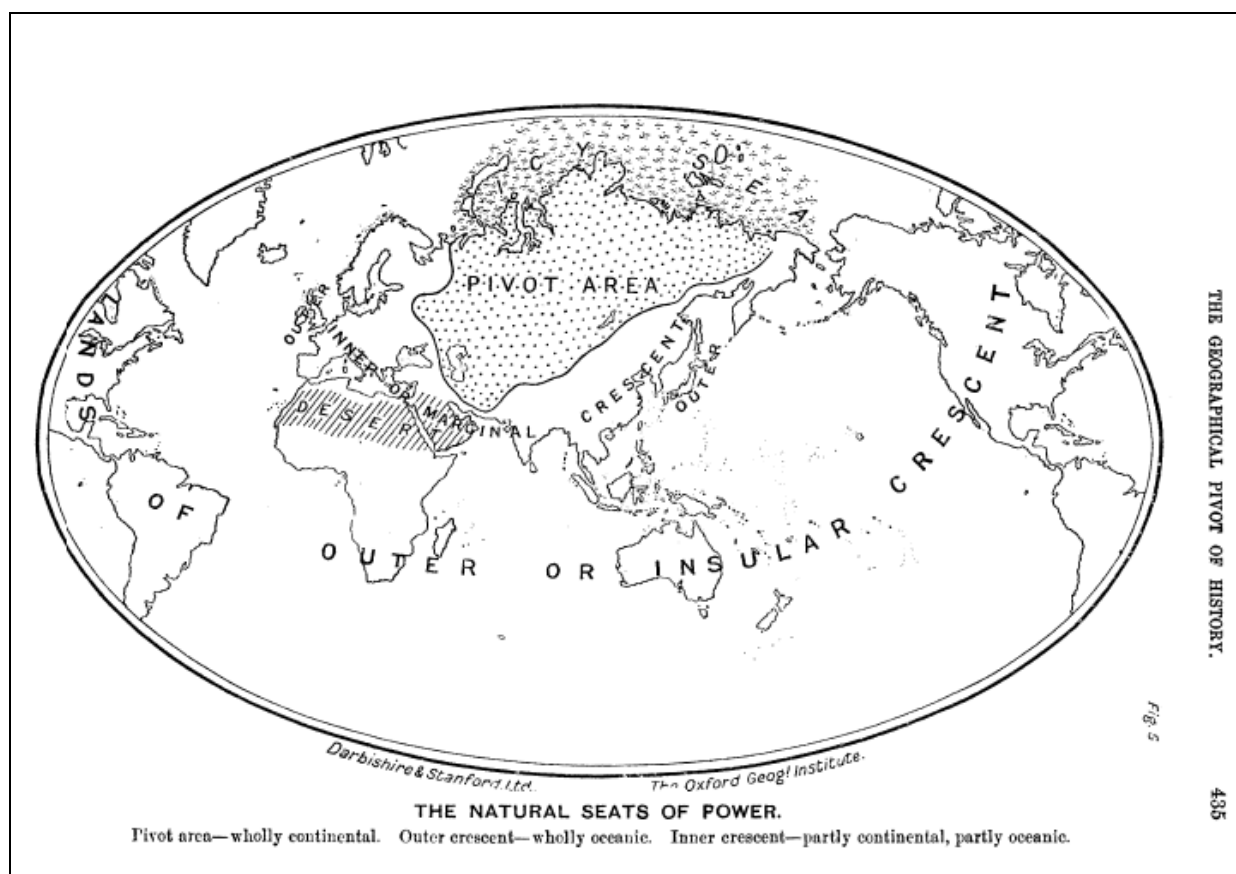


Fig. 1 The Graphical Representation of Halford Mackinder's Pivot Area. Source: The Geographical Journal, Vol. 170, 4 December, 2004.

In the contemporary geopolitical thought much emphasis is put to the fact that the hitherto traditional factors such as territories or boundaries gradually lose their relevance; instead, the economic contributors acquire substantial critical mass. As a corollary of the above, the international political environment has become subject to economization and in the last decade of the 20th century, rivalry

shifted towards the control of natural resources, especially energy resources, as well as the control of international trade. The modern economic structures and mechanisms in tandem with the growing importance of multinational corporations as global actors transformed the geopolitical thinking into geo-economic thinking, whereas the newly emerged world order can be considered as pax

oeconomicana. Citing Francis Sempa: “*geopolitics is about perspectives – it is about how one views the world,*” after the end of the Cold War the perspectives of global actors shifted and so shifted geopolitics (Sempa, 2009: 4). That is all the more reason why geo-economics has become one of the dominant instruments describing and analyzing the relationship between economic and political activities and geopolitical strategies in the context of the international environment. Contrasting geopolitics and geo-economics, Edward Luttwak explains that in the latter one the conventional military potential is replaced with investment capital accumulated and controlled by the state, whereas foreign markets penetration substitutes military presence and diplomatic activities (Luttwak, 2000). The added value of the geo-economic perspective lies in that it better reflects the 21<sup>st</sup> century reality and that it offers a modern analytical outlook on the world order in which the regional geo-economic powers compete for domination and influence.

## 2. THE ENERGY SECURITY

In terms of energy security, geopolitics manifests in the dynamic and static factors of spatial distribution of energy resources, which in reality comes down to the interplay among the regional energy supply and demand centers and the manner in which the geographical contributors affect both state and non-state actors in their pursuit to achieve energy security goals. For example,

The corollary of the fact that the oil market is global in scope is that any event which occurs in one part of the market affects all the other parts. An example illustrating such an interrelation may be a worldwide rise of oil price in the aftermath of a disruption event taking place in the Persian Gulf (Joffé, 2007). In light of the distribution of global oil and gas resources, energy security has both structural and political aspects. According to the early geopolitical theories of Halford Mackinder, the landmass of Eurasia and the resource self-sufficient heartland correlating with the territories of Russia was a subject of unrelenting interest of the maritime powers of

Great Britain and the United States. However, the history of the second half of the 20<sup>th</sup> century demonstrated an opposite course of events. Contrary to Mackinder’s assumptions, it was the Soviet Union that attempted to incorporate new regions under its sphere of influence and take control over the global trade routes in Europe and the Middle East during the Cold War era. While Europe was protected by NATO, the Middle East, with the more and more limited power of the declining British Empire, was prone to become another area of rivalry and conflicting interests. Finally, the complex nature of the internal tensions of the Middle East states themselves added to the long standing political volatility of the region and had a decisive impact on the United States assuming the role of a regional guarantor of stability. It is worth noting here that the security of supply is of lesser importance because it is in the vested interest of the producer states, heavily dependent on oil or gas rents, to secure the continuity of supply. What really matters is controlling the stability of oil prices by means of moderating the local or regional tensions (Joffé, 2007). Therefore, the US, for decades the largest oil consumer, backed the Middle East states, especially Saudi Arabia since the post World War II era. Today the situation is different since the majority of its oil imports comes from states outside the Middle East – according to 2010 data compiled by the US Energy Information Agency “*the top five sources of US crude oil imports for November 2010 were Canada (1,975 thousand barrels per day), Mexico (1,229 thousand barrels per day), Saudi Arabia (1,119 thousand barrels per day), Venezuela (884 thousand barrels per day), and Nigeria (806 thousand barrels per day)*” (EIA, 2011). Nevertheless, its heavy oil import dependence makes the US particularly vulnerable to any adverse events influencing the security of supply to global oil markets. Hence, the American foreign policy has been for decades engaged in promoting global energy security (Bradshaw, 2009).

The concentration of the biggest oil reserves in the Middle East has always made this region an arena of international competition for resources and recurring shifts

in the regional balance of power. The etiology of the tensions in the Middle East and especially in the Persian Gulf is deeply rooted in the British and French partitioning of the region which took place after the First World War and the collapse of the Ottoman Empire. Consequently, from 1918 on, the region became a contestable area where different super powers vied for influence. Until the end of the Second World War the dominant presence in the region was marked by the French and the British super powers. Later on, the Cold War competition for spheres of influence between the West and the East also affected the Middle East where the Soviets supported the post-colonial countries of the region and recognized the governments of Egypt, Iraq, Syria and Algeria when nationalist groups succeeded in ousting their old monarchies (Sorenson, 2008). It goes beyond any question that one of the major reasons why the competition for spheres of influence intensified considerably was the discovery of rich oil fields in Persia in 1908, and later in the 1930s in Saudi Arabia and other Persian Gulf

countries. With the 1950s withdrawal of the British and French from the region and with the new independent states in the region forging alliances with the Soviet Union, the presence of the US in the Middle East political landscape became essential and more vivid. In the 1950s, the US gradually became the predominant power securing the stability of the region in its efforts to support the ally monarchies of Saudi Arabia, Jordan, Iran and the Emirates (Lewis, 1997). While keeping in mind the growing importance of the petroleum industry worldwide, a brief glance at the map below illustrating the disproportionate endowment of world petroleum, suffices to realize why the access to the Middle East resources has become a top strategic priority in the last century. Figure 2 constitutes an instructive illustration of the mismatch between the regional centers of production and consumption between of crude oil. The relative size of the particular countries in the infographics proportionally represents the level of their oil reserves.

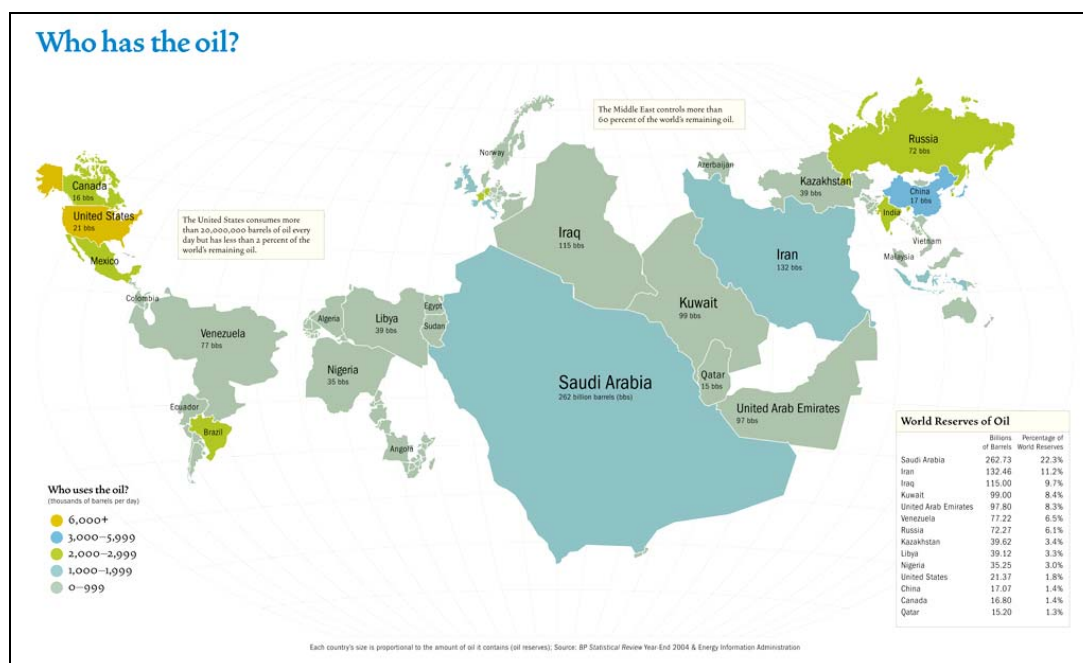


Fig. 2 The Distribution of World Petroleum Reserves, Source: <http://www.environmental-action.org/drilling-deeper>, data taken from BP Statistical Review, 2004 and EIA, 2004

Considering the dynamic factor of energy security geopolitics, it manifests in the security of oil and gas transit from the producing to the

consuming countries. The two modes of transport i.e. by maritime tanker fleet and by pipelines are highly problematic because of

physical geography constraints. In terms of maritime transportation, geographic constraints are frequently associated with the so called chokepoints defined as “*narrow channels along widely used global sea routes which are a critical part of global energy security due to the high volume of oil traded through their narrow straits*” (IEA, 2008). Being “*locations that limit the capacity of circulation which cannot be easily bypassed, if at all,*” the chokepoints are exposed to the risks of “*interruption or military interdiction*” (Rodrigue, 2004: 359; Joffé, 2007: 3). Interestingly, chokepoints are also considered to be vital assets so accessing them must be secured by some established institutional control which assumes the form of multilateral agreements regulating the usage of a given passage as well as settling potential disputes. With the expansion of international trade and maritime circulations, a number of chokepoints became key strategic locations in the world as uninterrupted distribution of oil is critical to guarantee that its supply meets demand. Taking into account the fact that world’s distribution of oil is characterized by

unique geographic features, the increasing importance of the chokepoints cannot be overstated. In terms of figures, an approximate annual volume of oil maritime transit equals 1.9 billion tons which accounts for about 62% of total petroleum production. The remaining part is shipped by pipelines, railway or road haulage over smaller distances. The daily figures of oil tanker shipments amount to 100 million tones, almost half of which departs from the Middle East with the point of destination in Japan, the US and Europe (Rodrigue, 2004). The producing and consuming shipping lanes, chokepoints included, are presented in the 1<sup>st</sup> Annex. The major global oil transit chokepoints identified by the IEA, the US DOE EIA and by Lehman Brothers Global Equity Research correlate to much extent and comprise the Strait of Hormuz, the Strait of Malacca, the Suez Canal/SUMED Pipeline, the Strait of Bab el Mandab, the Bosphorus and Turkish Straights and the Panama Canal. Table 1 below compiles data describing the 5 key global chokepoints in oil transit in order of their importance.

Table 1 Global Chokepoints in Oil Transit, Source: Own, data taken from Lehman Brothers Global Equity Research, 2009 and US DOE EIA, 2010

Chokepoint	Total global demand %	Capacity M bbl/d	Destination	Flows in 2009 M bbl/d	Geographical location
the Strait of Hormuz	20	17	Europe/US/Asia	15.5	Between the Gulf of Oman and the Persian Gulf
the Strait of Malacca	18	15	Asia	13.6	Between Malaysia and Singapore
Suez Canal SUMED Pipeline	5	4.5	Europe/US	2 (data for 2010)	Links the Red Sea with the Mediterranean
the Strait of Bab el Mandab	4	3.3	Europe/US/Asia	3.2	Links the Red Sea with the Arabian Sea
the Bosphorus and Turkish Straights	3	2.4	Western/Southern Europe	2.9	Links the Black Sea with the Mediterranean

In the last decades, the geographical features of energy supply and demand have been subject to transformations on account of

the demographic and economic changes occurring both in the OECD industrialized north and non-OECD global south (Bradshaw,

2010). But, historically, the uneven distribution of global resources of oil and natural gas not correlating with the regions representing the biggest demand for these energy carriers, has always been the cause of fierce competition among states for access to the resources which in turn lead to the engagement of the US in the Persian Gulf, of Russia in Central Asia and more recently to China's presence in African oil producing countries and in the South China Sea. The inclusion of China and India to the energy markets as new global consumers of oil and gas at the turn of the 20<sup>th</sup> and 21<sup>st</sup> centuries further complicated the already challenging patterns on the map of energy resources supply and demand.

### 3. THE CHINA CASE

From the 1990s on, Chinese authorities have come to realize that the hitherto strategy of the country's energy self-reliance is illusionary and that soon the increasing dependence on the imports of energy carriers

will become a stark reality. Until the 1980s when the country's economy was liberalized, China exercised the policy of isolating itself and relying on domestic energy supplies but in the last decade of the 20<sup>th</sup> century it became clear that the exponential growth of Chinese energy demand could no longer be satisfied by its domestic supplies (the Economist, 4<sup>th</sup> August 2007). Although China attempted certain activities aiming at the diversification of energy supplies, the possible options turned out to be quite limited. Frequently described as strategic or mercantilist, China's approach to energy policy partly results from the government's efforts to maintain control over the whole energy sector through the ownership of state energy companies as well as wholesale and retail prices of oil and gas products. In doing so the Chinese government tries to secure employment in its strategic industries and progressively, once Chinese energy companies expand overseas to provide further employment opportunities for its labor (Andrews-Speed, 2006).

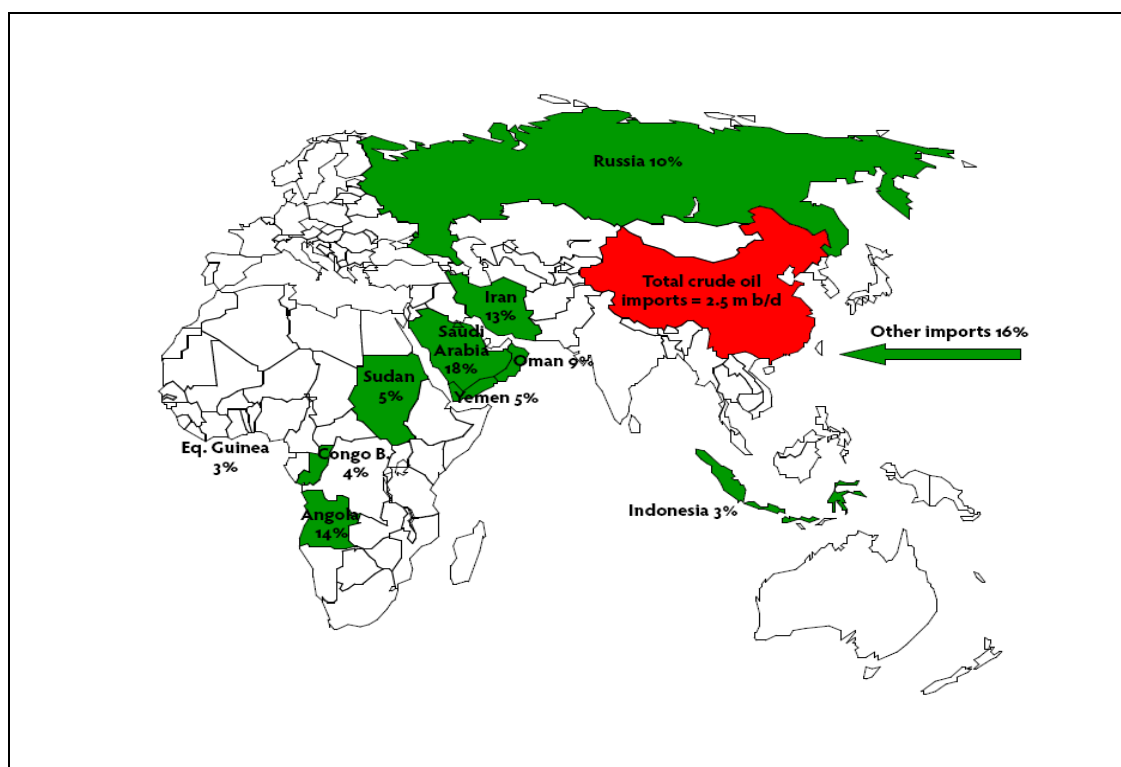


Fig. 3 Chinese Crude Oil Imports, Source: Changing Climates: Interdependencies on Energy and Climate Security for China and Europe, Chathamhouse Report November 2007

Considering the international dimension of Chinese energy policy, the main emphasis is put to the diversification and security of oil and gas supplies as major Chinese concerns relate to the possibility of physical disruptions of oil supplies from the Middle East region. With a view to securing long-term supplies, China signed in the late 1990s exploration and supply agreements with Saudi Arabia, Iran, Angola and Russia backed with diplomatic or economic measures such as military initiatives, technology transfer or construction services. Interestingly, China's energy imports encompass predominantly crude oil instead of final oil products. The reasoning behind such preference is that domestic refining allows for maintaining jobs in the Chinese oil sector, it also allows for the state regulation of oil prices and finally for fostering foreign investments in China's refining facilities (Andrews Speed, 2006). Since 1993, China's National Oil Companies (NOCs) have been aggressively acquiring energy assets in all major oil producing countries. In certain regions, especially in the African countries, Chinese investors are perceived as strategic partners supporting the local underinvested economies as they assumed a non-interference approach in terms of investments and foreign assistance activities positioning themselves as "*promoters of south-to south cooperation*" (Hodd, 2008: 50).

On the other hand, international governments and NGOs strive to pressure the African regimes to respect human rights, to improve the quality of life of their people and utilize the possibility of oil revenues to diversify their economies and develop essential infrastructure (Bradshaw, 2009). The objections of Western governments raised against China's presence in Africa frequently quote the examples of Sudan and Angola where Chinese oil revenues fill the coffers of corrupted oppressive regimes violating human rights. Another thing is that Chinese National Oil Companies (NOCs) in their pursuit of new oil supplies do not hesitate to make deals with states which antagonize the US, namely Iran and Venezuela.

In case of Iran, China has been steadily increasing its oil imports from that producer

since the second half of the 1990s to achieve a decade later the position of Teheran's leading market for oil exports. Apart from the economic rationales, the additional political and strategic reasons behind the close relations with China are more than clear, in the opinion of Leverett and Bader: "*As Teheran comes under increased international pressure over its nuclear activities, the support of a permanent member of both the UN Security Council and the International Atomic Energy Agency Board of Governors provides much needed international political power. Given China's history of supplying arms and sensitive military technology to Iran, Teheran expects Beijing to play such a role again... Oil and gas deals that Iran has concluded with China have a distinctly strategic quality to them; they seem intended to ensure access to an important export market and bolster a developing political relationship.*" (Leverett and Bader, 2006 : 194)

With regard to the countries which emerged after the collapse of the Soviet Union, Kazakhstan, Uzbekistan and Turkmenistan, the presence of Chinese investors is welcomed as a viable counterbalance against Russian control over their national energy assets and the access to the global energy market. Chinese investments into the pipeline infrastructure offers the Central Asia states an opportunity to reduce their dependence on Russian transport routes; from the Chinese perspective, agreements with Central Asia countries concerning the construction of pipelines enable Beijing to effectively diminish its reliance on international oil sea-lanes from the Middle East (Chatham House, 2007). China's growing political activity in the region of Central Asia was conducive to the formation of the Shanghai Cooperation Organization (SCO) in 2001. With the overarching objective of uniting China, Russia and the Central Asian states, the core activities of SCO focused on the issues of terrorist and separatist threats as well as energy policy and infrastructure development. Some international commentators, suggest that China's major priority within the organization is lobbying for turning the ancient Silk Road in Central Asia into an "*Energy Road*" (Müller-Kraenner,

2008). Last but not least, China's policy in East Asia manifests in fierce competition with Japan and South Korea for the access to energy resources. The relations between China and some of its neighboring countries have become characterized by territorial disputes over prospective offshore oil and gas fields. On the other hand, Chinese relations with

South and South East Asia, especially Indonesia and Myanmar are far less tense since China has traditionally imported substantial volumes of oil from that region. What is more, Beijing regional energy strategy initiated activities leading to the coordination of Chinese and Indian investments of energy companies overseas (Müller-Kraenner, 2008).

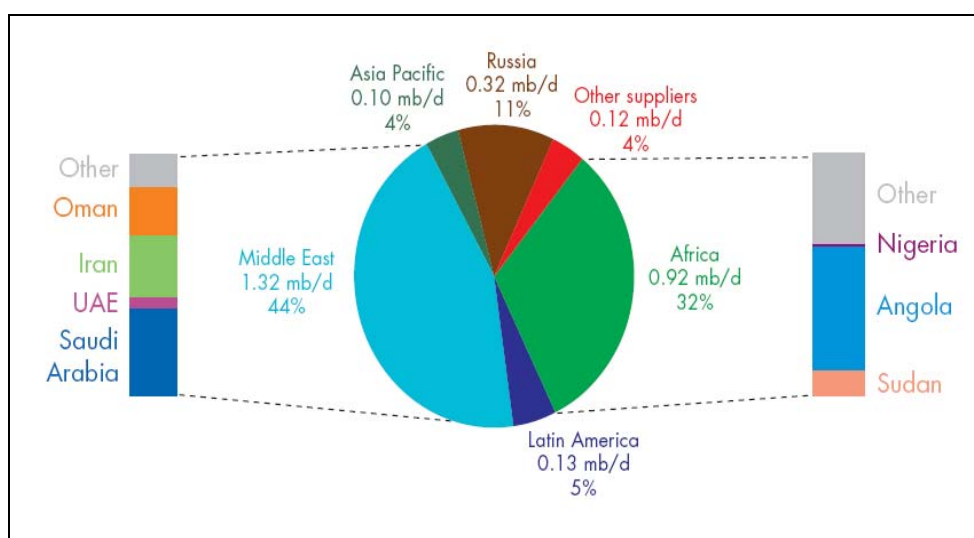


Fig. 4 China's Crude Oil Imports by Region in 2006, Source: World Energy Outlook 2007

China's engagement on the African continent is particularly vivid in terms of the country's cooperation with Sudan and Angola. The International Monetary Fund estimated that Chinese trade in the region might total 100 billion US dollars by 2010. Further aid in the form of preferential loans, credits or debt cancellation pushed other donors aside making China the most active foreign investor, trader and customer for oil and other natural resources in the region. Although China's policy of compromising on democratic principles or human rights to secure its economic interests, and in particular access to energy resources, has aroused bitter criticism on the international arena, its developmental aid is unprecedented and unlike other international investors, the Chinese provide a pragmatic approach based on mutual benefits and reciprocity instead of imposing western standards of governance (Traub, 2006).<sup>1</sup>

As regards the geopolitical determinants of energy security from the European perspective, the dwindling EU 27 domestic production, able to satisfy merely less than half of its energy demand, entails increasing import dependence; Figure 5 below illustrates these trends. On top of this, the EU energy situation is further complicated by the fact that the member states represent various energy mixes and have to cope with their own energy sector challenges. The series of complex energy issues Europe faces originate from economic and geopolitical developments. Within the EU structures, the processes involve the recent enlargement incorporating Central and Eastern European states in tandem with the ongoing market integration. In terms of the external environment, Europe is also affected by the altering balance among the leading global powers of the US, Russia, Japan and China as well as by the evolving structure of global oil market (Correlje and van der Linde, 2006). Interestingly, until the mid 2000s, the EU and its member states were able to exercise an approach characterized by the

<sup>1</sup> The section on China is a revised excerpt from a paper presented by the author at 2009 ICYS Conference, Prague



separation of energy issues from political and strategic aspects relying predominantly on market forces regulation of energy supply and demand. However, with the exponential growth of energy demand in the emerging economies of China and India coupled with quintuple rise of oil prices since 2002/3, governments gradually came to realize that

new measures must be pursued and implemented in order to safeguard against disruptions in the energy supply system resulting from “*structural weaknesses in market mechanisms or from challenges that cannot be handled by the markets alone*” (Umbach, 2010: 1230).

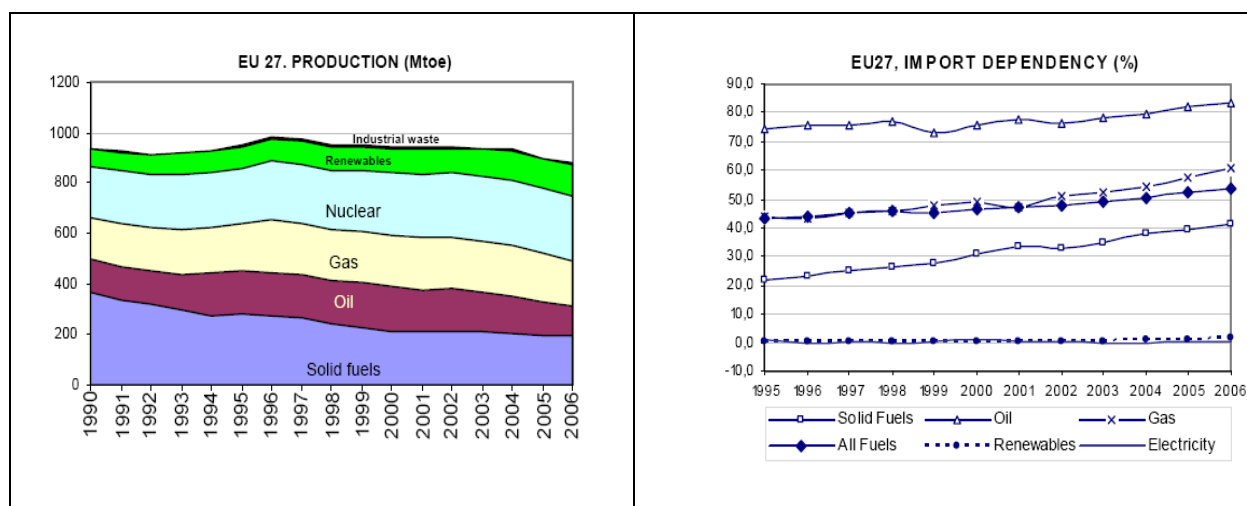


Fig. 5 EU 27 Energy Production and Import Dependency, Source: An EU Energy Security and Solidarity Action Plan, 2008, data from Eurostat

Because the internal EU market has been traditionally governed by the common standards and acceptance of the paramount significance of market forces, politics could be separated from economics; however, outside Europe the geopolitical and strategic rationales of foreign and security policies have been more and more often adopted, especially in the US, China, Russia or OPEC countries. A turning point in the long standing reliance on market forces regulating the issues of European energy security was the 2006 gas dispute between Russia and Ukraine resulting in gas shortages across Europe (Umbach, 2010). As Pierre Noël aptly verbalizes the issue “*when it comes to gas, the Iron Curtain still seems to cut Europe in two – in the Western EU, the markets are large but diversified, in the East the markets are smaller but much more dependent on Russia*” (Noël, 2008c: 9). Developed in the 1970s, the system of pipeline infrastructure transiting the Siberian natural gas to Europe was dramatically affected by the political and economic transformations which occurred

after the revolutions of 1989 and the 1991 collapse of the Soviet Union. In the new political environment, independent countries separate now Russia from the European markets, whereas Russia’s gas exports operated by a stated-owned monopoly – Gazprom frequently assume geopolitical dimension, especially towards the so called near abroad countries where gas pricing is used as a reward or punishment tool (Bradshaw, 2009). The increasingly complicated geopolitical developments triggered Europe’s response to the challenge of the dependence on Russian gas and materialized in the form of energy diversification strategies focused on Central Asia, Caspian and Black Sea regions. The EU has adopted a far more pro-active stance with a view to broadening and deepening energy oriented relations with the neighboring countries; in parallel, the EU commenced activities leading to the incorporation of energy issues into its Common Foreign and Security Policy (CFSP). The Central Asia and the Caspian/Black Sea regions opened a viable

opportunity to strengthen Europe's energy supply security by gradual shifting away from the dependence on Russia. Therefore, numerous energy projects and initiatives were undertaken, for example INOGATE whose objective was to foster the build-up of a pipeline infrastructure system enabling the regions' oil and gas flows towards Europe. Another one, the Baku Initiative which took off in 2004 aimed at integrating the regions' energy markets with the EU market and at facilitating the transport of Caspian energy resources to Europe. In both the cases, the underlying rationale was for the Caspian region to develop alternative routes bypassing Russia and also to gain a better position in negotiating transit fees for shipments that go through the Russian infrastructure. Before the INOGATE initiative was forged, Russian domination in the production and distribution of oil and gas in the Caspian region had been unquestionable. For the region's landlocked countries that situation meant that almost all their shipments of oil and gas were transported north and westwards via Russia's pipeline system enabling the latter to dictate oil and gas prices, transit fees and the level of volumes to be transported (Belkin, 2008).

The efforts to divert the region's energy flows from the established North-South axis to an East-West axis towards the European market and to decrease the dependence of the Caspian region on Russia manifested in three pipeline projects of major importance: the Caspian Pipeline Consortium, the South Caucasus Gas Pipeline and the Baku-Tbilisi-Ceyhan (Belkin, 2008). The Caspian Pipeline Consortium, "*the largest operating investment project on the territory of the former USSR*" connects Western Kazakhstan oil fields with the marine terminal of Novorossiysk from where the crude oil is transported to global markets by tankers (CPC, 2011). Bypassing the Straits of Bosphorus, the BTC pipeline has been exporting crude oil from Kazakhstan and Azerbaijan since July, 2006. Running parallel to the BTC, the South Caucasus Gas Pipeline, also known as Baku-Tbilisi-Erzurum, provides gas to Europe via a Greek transit pipeline. The importance of the new energy corridor is manifold but its major contribution lies in that

it constitutes an infrastructure system providing more than one million barrels of oil per day to Europe with the potential of the Caspian region becoming one of the leading sources of alternative energy supplies for EU. Last but not least, the completion of the energy corridor project facilitated cooperation activities between Azerbaijan, Georgia and Turkey and may serve as a showcase for potential investors that the implementation of massive infrastructural projects involving the states of the region is viable. This in turn provided the foundation for the Nabucco gas pipeline project, a new energy bridge linking the Caspian, the Middle East and Egypt with the European markets (Cornell, 2009).

Notwithstanding the potential of the Caspian region energy resources in strengthening the EU's diversification strategies and security of supply, concerns are raised in terms of the political stability of its states. On top of the agenda are issues such as the Azerbaijan/Armenia conflict over the Nagorno Karabakh, internal tensions in Georgia or Ukraine as well as the increasing Iran influence in the South Caucasus (Belkin, 2008). The case of Georgia would deserve a much more detailed discussion, well beyond the scope of this dissertation. In short, on account of the August, 2008 Russian attack on this country it may serve as an illustration of the fact that "*the expansion and continued existence of the West's major achievement in the region – the Caucasian energy corridor – is incompatible with Moscow's current geopolitical ambitions*" (Cornell, 2009: 132). Although the EU has managed to enhance its security of energy supply by executing numerous pipeline and LNG projects, the monopolistic strategy of Moscow characterized by a mixture of commercial and geopolitical targets frequently interfered with the EU policy towards the Caspian and Central Asia states. An illustrative example maybe the Russian attempt to undermine the feasibility of the Nabucco project by proposing a rival South Stream pipeline, or to offer Turkmenistan, Kazakhstan, Azerbaijan, Iran or Qatar to buy their gas for exports to Europe (Umbach, 2010).

#### 4. CONCLUSIONS

To round up the discussion on the geopolitical determinants of European energy security, one major conclusion might be drawn; first and foremost, the long established EU stance of applying the principle of market governance in terms of energy security issues reveals significant shortcomings and seems to be insufficient in light of the changing international environment in the last two decades. One of the possible solution proposed by the World Energy Council could be strengthened cooperation between the public and private sectors both domestically and internationally. In addition, there appear certain pragmatic postulates for the European governments and EU institutions to adopt an approach amalgamating geo-strategic and market governance principles (Umbach, 2010; Youngs, 2007). This remains in line with the most recent EU's energy document, *Energy 2020: a Strategy for Competitive, Sustainable and Secure Energy*, which promotes inter alia "establishing privileged partnerships with key suppliers and transit countries while pursuing diversification of import sources and routes" (EC, 2010: 19).

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Fig. 6 Global Oil Transit Chokepoints and Shipping Lanes 2008, Source: Lehman Brothers Report, 18<sup>th</sup> January, 2008