

*\The Evolution of Geoeconomics:
From its historical origins to a Geoeconomic network*

Abstract

Paraphrasing Joseph Nye's illustration of power, '*Geoeconomy is like the weather. Everyone depends on it and talks about it, but few understand it.*'¹. The ambitious End State of this new research is the formulation of *Geoeconomia*² a new discipline of Social Sciences. The purpose of *Geoeconomia* is to describe the new world economic environment and to decode the behavior of its actors. This new field of study will materialize by organizing the fragmented landscape of *geoeconomics*, a term widely used in literature mainly since the 1990's, utilizing modules of International Political Economy, Economics, Geopolitics, International Relations, History and Business administration. In order to alloy the composing elements of this new discipline and borrowing the methodological approach from physics, in the 'periodical table' (world economy), we will construct a new element, deriving from others known and widely examined. The new element in the world system we will call it State Scale Entity (SSE). Using as a reference world-system analysis, from Wallerstein to contemporary scholars, a new approach will be presented suggesting the evolution of the core/periphery world-economy architecture to a geoeconomic network. In the frame of this new structure, we will discuss the economic implication of a category of SSEs, which I call *Contemporary SSEs- Digiti* SSEs like Google, Apple, Facebook and *State Mimicking* SSEs like the Islamic State.

Keywords: *Geo-politics, Geoeconomics, World-systems, Digital Economy, Defence.*

In a post-post (post²) Cold War, post-Fordist globalized economic habitat, where citizens tend to be replaced with *internauts*, *mobinautes* and *u-tubers* and *homo oeconomicus* with *homo consumus*, enterprises/corporations care less and less about borders whilst the opposite holds for Nation-States. The distinctive lines between foreign policy and commercial relations and between international and economic relations have always been dim, but the post²-Cold War world of "Deep" economic integration³ and the – seemingly - post-geographic economy require new decoders. The neo-liberal rhetoric of the Anglo-Saxons, the Germanic Social-Market economy (Soziale Marktwirtschaft), the capitalism without democracy of China, or the Market Imperialism of Russia, all coexist all in a 'severe' globalized frame, therefore creating a perplexing international economic nexus. The end of the post-Cold War era is leading to a de-centralized multi-core notion of world economy and to a G20-logic. For the purpose of this study the following assumptions are going to be made: *Firstly* the term 'state' expresses the totality of the terms 'nation', 'nation-state' and 'country'

corresponding to the ‘territorial state’ describing the 193 members of UN General Assembly. *Secondary*, that the global system is integrated into a single world economy

In the new world-system we witness the mushrooming of new different-than-State actors and the proliferation of the terms that aspire to describe them. Multinational Corporations with wide ‘social accessibility’, like Google, Facebook and Apple, have acquired enormous (hard soft and smart) power. Terror organizations like the Islamic State (ISIS) have evolved and ‘riding the wave of globalization’ are acquiring state characteristics, producing repercussions to regional and global macroeconomics. Non-state actors, hybrid state entities, NGOs, etc. constitute a term-cloud with vague distinction lines. The common denominator of a large group of them is that they are vectors of economic activity.

In this first paper, using a heuristic approach will be presented (i) a review of the origins of geoeconomy in space (Greek, German, French and Anglo-Saxon schools) and time (history) (ii) an overview of the relation between geo-politics and geoeconomics (iii) the evolution from of the core/periphery world-economy architecture to a geoeconomic network (iv) the taxonomy and the qualifying characteristics of SSEs, along with the economic implications of the *Contemporary SSEs*.

GEOECONOMICS TROUGH TIME AND SPACE

The battle for acquiring or maintaining economic supremacy and the control of natural resources was historically the underlying logic of every major conflict. From the Trojan and Peloponnesian Wars to the latest 21st century military interventions, the underlying motivation was the enforcement of economic freedom – and essentially the preservation of access to natural resources. Even the Islamic State (ISIS) phenomenon could not be explained without analyzing the access and the exploitation of natural resources.

The seeds of geoeconomic reflection could be located in Thucydides who, in the frame of the Peloponnesian War, underlined that “*The war will not be decided in Attica, as some people think, but at the locations where Attica pulls out its resources*”⁴. In line with the perspective of the physiocratic economic school – which he founded⁵- The French economist François Quesnay suggested that agriculture was the sole source of the wealth of nations. He argued in his “*Tableau économique*” and in the “*Analyse de la formule arithmétique du Tableau économique*” that the productive class of citizens- as opposed to the “*proprietors*” and “*sterile*” classes- created the annual wealth of the Nation by cultivating the land⁶. He also advocated the first *laissez-faire* approach in the form of the free circulation of grains, a decade before Smith’s “*Wealth of Nations*”. In essence, Quesnay combined two fundamental principles of early

geoeconomic thought: The economic linkage of man with land and the free flow of products.

At the beginning of the 20th century, the term *geo-economy* corresponded to *Economic Geography*. Konstadinos Sfiris, a Greek economics professor in the 1920's argued that geoeconomy and economic science share the same objective:

the multilateral action and effort of “homo oeconomicus” in his interaction with “Terra Oeconomica”⁷- Ολογαϊκός Χώρος or Global Confined Space- in order to obtain the material means of its existence and in the frame of human social activity in the historical time-space continuum.

in other words, *the reciprocal action of man with its natural and social environment*⁸. By ‘nature’, Sfiris defined the conjunction of natural phenomena and forces and the natural recourses available. In his study “*Nature and Natural Terms in Geoeconomy*” he analyses the influence of earth position and movement in all aspects of economic life (calendar, agricultural production, division of labor) by underlining that “*those cosmic terms remorselessly and absolutely determine human life and economy*”⁹. According to Sfiris, the first founder of geoeconomy could be considered Karl Knies, with his 1835 work “*Die Politische Oekonomie vom Standpunkt der geschichtlichen Methode*”. Knies - who along with Wilheim Roher and Bruno Hildebrandt were the founders of the German historical school of economics¹⁰ - argued that the basis of geoeconomic research lies in the strong connection between populations and the distinctive advantageous or unfavorable natural characteristics of the areas in which they are living. To quote:

Different peoples are like inheriting sons, who appear armed with various fortunes in deferent degrees and nature for urban society life. These people are found themselves equipped with all kind of different dower from nature in pursuance of their existence across centuries and in order to complete their mission in the frame of international community¹¹.

According to the French geographer's Joseph-Georges Kergomard definition, “*Geo-economy examines the relations between man and land; It investigates which products are provided by land to man, either naturally like lumber and other forest products like quarry, fish, or mineral water, or as the outcome of human intervention like agricultural products, livestock farming and exploitation of mineral resources. Furthermore it examines, which is the usage by man of these products, how is he feeding itself from them, how is he reworking them for the Industry, how he is transporting and exchange them*”¹².

Using the term *geo-economy* in order to describe *Economic Geography*, Ernst Friedrich distinguished *General (Allgemeine)* - from *Specific (Spezielle)*:

General Economic Geography has the task of contemplating the economic phenomena in general and in relation to the land, as opposed to Specific, which treats consecutively the individual spaces of economic activity (Wirtschaftsräume).

Furthermore, Friedrich differentiated *General Geo-economy/Economic Geography* to *Dynamic*-which treats man as economic factor in forward place-and *Static*-which focuses on natural characteristics and resources¹³. In the same context, Sfiris has also codified *geo-economy* in *General (Γενική)* - the science of researching Global Economy and *Specific (Ειδική)*- the research of distinctive Areas of *Economic Chorography*¹⁴.

The term *geo-economy* has been used by German scholars for the conceptual representation of the relationships between Geology and Practical Economy and especially in the field of mining economy¹⁵. In 1925 Arthur Dix suggested a connection with *geo-politics*:

Geo-economie (Geoökonomie) lies in the same context with the study of global Economy as treatment of supranational economic relationships. Furthermore, like *Geopolitics* will offer in the future possible uses of data acquired by economic Geography and will also reveal the Guidelines of global Economy¹⁶.

In 1946 in post-war Greece, Alexiades associated *geo-economy* with demography, pastoral farming and agriculture (traditional primary sector) in the frame of national territorial claims¹⁷. In 1959 Mistradis talked about the *geo-economic axis Mediterranean-Black Sea*. He identified a *geo-economic ring (belt)* around the globe linked by three major *geo-economic axes* i.e. *Mediterranean Sea - Red Sea, Indian Ocean - Pacific Ocean* and *Pacific Ocean - Atlantic Ocean*¹⁸. In the 1960's Jacques Boudeville used the term *geo-economy* as an alternative to *geopolitics*¹⁹. Broadening Boudeville's and Dix's analogy of *geo-economic* with *geo-politics* a more elaborated analysis should be presented.

ON GEOPOLITICS AND GEOECONOMICS

The relation between *geo-politics* and *geo-economy* depends on the research goggles. The term *geopolitics* was coined at the beginning of the 20th century, with a DNA coded in Nietzschean philosophy and Otto von Bismarck's notion of global dominance, and was nurtured by Ratzel and Haushofer perceptions of *Real- and Welt-politik*²⁰. Its aggressive (confrontational) face, which reached its peak with WWII, has

been progressively changed to an explain-everything method through geography, history and power relations, notably in the post Cold-War era. Agnew and Corbridge introduce the emerging school of ‘new geopolitics’ around four main theoretical presuppositions: (1) the territorial state is not a trans-historical given. Non-state organizations like the World Bank and the IMF illustrate the limits of ‘sovereignty’ in the so-called world of ‘nation-states’ (2) The approach should be diachronic and via a *geopolitical economy*, rather than a static geopolitical distinction between politics and war (3) The success in world economy is not a result of natural resources endowments but the product of historical accumulation of assets and liabilities and of adaptation capability (4) The concept of ‘representation of space’ should be enlarged to ‘representational spaces’ involving all the concepts and geographical codes used to talk about and understand special practices. They seriously challenge the territorial state, suggesting that globalization and fragmentation constitute its Final Fall. The emerging dynamic world could not be adequately understood around fixed territorial units²¹. The definition (if any) and the notion of geo-politics have evolved through time and space but the one suggested by *Encyclopedia Britannica* provides its essence concisely: ‘*The use of Geography by governments practicing a policy of power*’²².

On the same wave length with Luttwak, Grosse advocates the primacy of geopolitics over geoeconomy: ‘*from the perspective of geoeconomics, the main target of economic policy is to improve the state’s geopolitical potential, and to use the available instruments of economic policy (and the capacity of the country’s economy) to maximize benefits in external relations.*’²³ Agnew and Corbridge on the relation between geo-political and geoeconomic interests talked about ‘geopolitical economy’²⁴. Chase-Dunn contents that geo-politics and economic competition constitute a single integrated logic in the modern world-system.²⁵ Sparke presents a comprehensive relationship between geo-politics and geoeconomics in his table “*Contrasting geopolitics with geo-economics*”²⁶, challenges the belief that ‘*geo-politics and geoeconomics describe distinct geostrategic periods of interstate periods*’ and argues that “*geo-politics and geoeconomics are better understood as geostrategic discourses*”²⁷. He questions Friedman’s rhetoric of a *flat-borderless world*²⁸ that signaled the end of geography and a post-geopolitical era, underlining: “*geopolitics and geoeconomics are actually entangled with one another today in the form of a ‘double vision’: a double vision that maps the divergent economic imperatives towards territorial fixing and geographical expansion in a distortive way that repeatedly divides the world into distinct zones-zones of geopolitical conflict on the one side and spaces of geoeconomic peace on the other-rather than coming to terms with the global ties between the two*”. He (slightly) challenges the “*would be Ratzels and Mackinders of geoeconomics*” to finally “*formalize its meaning*”²⁹. He also ‘translates’ Friedman’s duel of The Lexus vs the Olive Tree into a neoliberal nexus of *securitized nationalism vs free market transnationalism*³⁰. By hyphenating geo-politics I adhere to

O'Tuathail's and Sparke's line of thought that –with the exception of critical geopolitics - '*geo-politics was and remains very much a writing of the geo-, a geographical inscription*'³¹. By contrast, I detect that geoeconomy is more about the - *economy* and less about the *geo-*, hence the lack of hyphenation

THE CONTEMPORARY APPROACH

Luttwak³² claiming that “*both military power and classic diplomacy have lost their traditional importance in the central arena of world affairs*” gave geoeconomy a military dimension claiming that:

in geo-economics, as in war, offensive weapons dominate. Of these, research and development force-fed with government support and taxpayers' money is the most important. Just as in war the artillery conquers by firepower territory that the infantry can then occupy, R&D can conquer the industrial territory of the future by achieving a decisive technological superiority.

According to Sparke:

geoeconomics can be understood not just as a description of a certain style of economically oriented geopolitics, but also as a form of spatial strategy, which, like the so-called hidden-hand of the market, itself emerges more as a systemic net effect.

He also argued that geoeconomic should be examined in relation with the positioning within global free trade and borderless economic flows, resulting from geographic position and talked about the reinvention of geo-politics in the context of economic independency³³. Smith positioned the notion within integration in the European Western-market economic establishment³⁴. Sidaway frames it in global capital circulation and monetary policies³⁵. For O'Hara and Hefferman, geoeconomy is all about acquiring and securing vital natural resources³⁶. In the same vein, according to Søylen:

Geoeconomy is the study of special, cultural and strategic aspects of resources, with the aim of gaining sustainable competitive advantage. It is a continuation of the logic of geopolitics, applied to the era of globalization.

Furthermore he replaces Mackinder's *Heartland* and Spykman's *Rimland* - dear perceptions of continental and sea perspectives respectively of classical geopolitics discourse - with *Nareland* (**N**atural **R**esources **L**ands)³⁷. Mercill's “geoeconomic logic” expresses the economic aspects of geographical capital expansion³⁸. Hsiung

shifts the power from geography and ideology to self-sufficiency in natural resources, relative freedom from markets and control over labor force³⁹. The Turkish Prime Minister, Ahmet Davutoğlu, outlining Turkey's Grand Strategy, attributes the geoeconomic characteristics of the Middle East to its double role as natural resources and commercial axis between Western Europe and the East but also as a natural resources reservoir.⁴⁰ Sa'id Ali defines that the “*objective of Geoeconomics is, at a minimum, to safeguard the economic well being, and its ability to withstand economic competition*”⁴¹. We may distinguish that Ali's definition expresses *defensive geoeconomy*. By contrast, the objective of *offensive geoeconomy* is, not just access and control but also the acquisition of new (natural or digital) resources and/or the highest possible market share –the *Marketland* if we want to adhere to the *#land* neologisms– by applying economic power and influence within a specific operational economic (physical or digital) environment. In order to place the state and the SSE to this environment, to this area of economic operations, we need to understand its evolution. The methodological point of reference will be world-systems analysis.

FROM THE WORLD-SYSTEM TO A GEOECONOMIC NETWORK

According to Babones: ‘*World system analysis is first and foremost a framework for interpreting the modern world of the last 500 years as a social system driven by market exchange*’⁴². During the 70's, Wallerstein (1974)⁴³ coded the *State of the World*, presenting three structural positions in a world-economy: *core-periphery and semi-periphery*, the last one offering a ‘buffer’ zone to ensure the stability of the system. He approached the global economy with a holistic view inseparable from Capitalism:

in the nineteenth and twentieth centuries there has been one world-system in existence, the capitalist world-economy...Capitalism and a world-economy (that is a single division of labor but multiple polities and cultures) are obverse sides of the same coin. One does not cause the other. We are merely defining the same indivisible phenomenon by different characteristics... Capitalism was from the beginning an affair of the world-economy and not of nation-states.

He recognized four stages of the capitalist world-economy, the forth-one beginning with the Russian Revolution of October 1917.⁴⁴ Later this classification of countries in a hierarchy of homocentric strata from a basic structure of core⁴⁵, semi-periphery, periphery to a rather complicated system of hegemonic core power, other core powers, second tier core powers, first periphery, weak periphery etc. In general and according to Wallerstein's view the core/periphery hierarchy is a structure of domination and exploitation⁴⁶.

Snyder and Kick (1979) accepted the world system as the appropriate point of conceptual orientation, recognized the three structural positions and accepted that this 'labels' indicate an international division of labor in which the core is linked to the periphery. Nevertheless, the accent is not on individual characteristics but on the relationships between countries. On the classic model they proposed three criticisms, regarding: a. the operational criteria and the lack of precise rules of classification, b. the research strategies and c. the indicators used so far by the scholars of the world system. They suggested a *four-network blockmodel* of: a. trade flows, b. military interventions, c. diplomatic exchanges and d. conjoint treaty memberships. By applying CONCOR algorithm on the data collected regarding the aforementioned networks (representing 118 nations circa 1965), they produced a number of nations-block matrixes as frames of comparison. By identifying the core/periphery/semi-periphery nations-blocks, they empirically validated the three-stratum structure. Furthermore, by using the GNP per capita over a fifteen-year period, they measured the effect of block membership on economic development. In this regard they clarified the commonly confusing point on the difference between *economic growth* and *economic development*, with the former addressing the *tactical* and the later the *strategic* level of an economy. According to Snyder and Kick analysis '*Nations are the constituent units or members of the 'population'*'⁴⁷.

Nemeth and Smith (1985) extended and refined the research of Snyder and Kick and using also the *blockmodeling* technique, countries were mapped into structural positions according to their patterns of commodity trade, focusing exclusively on networks of economic exchanges. To this end, they analyzed country exports using United Nations data of the year 1970 and constructing a Five-Network Model for 86 nations. The results suggested a fourth stratum, a 'second' or 'weak' semiperiphery, intermediate between the periphery and the 'first' semiperiphery. In order to measure the effect of block membership on economic strength and growth they chose GNP/capita in 1970 and the average annual growth rate in GNP/capita for the period 1970-1979. Additionally, they inserted in the *economic growth/development equation* the parameters of income distribution and social welfare by using indicators like the Gini coefficient and child mortality.

Arrighi and Dragel (1986) also concluded that the world economy shows patterns of stratification. All states enclose within their boundaries both core and peripheral activities. Representing the function of the Share of Core Activities in the Mix to the present of World Population, they conceptualized the threshold of the 'perimeter of the core' (PC) and the 'perimeter of the periphery' (PP) in order to designate the lower boundary of the core zone and the upper boundary of the peripheral zone. Nevertheless, the primary function of the State is not as profit-maximizing unit and the accumulation of wealth but the classic Weberian legitimate use of violence monopoly

(*Gewaltmonopol*) *against all enemies foreign and domestic*⁴⁸. Consequently, they adhere more to the notion of state as a geopolitical unit⁴⁹.

Smith and David (1992) used roughly the same data for 63 countries (using the REDI blockmodeling procedure) on commodity trade flows used by Nemeth and Smith but took extra steps by examined the structure of international economic exchanges at multiple points in time and answered questions about the upward or downward mobility of individual countries in the global economy. Furthermore, they addressed the issue of hegemonic decline of the US and attested that while maintaining its dominant position, the gap between this country and others narrowed. They identified multiple subgroups thus providing evidence of a continuous scaling of world positioning in addition to a typology by block. They also questioned the validity of GNP per capita as a measurement of economic development and proposed the *average* level of GNP per capita.⁵⁰

On the subject of stratification, Chase-Dunn (1998) goes even further:

For myself the vocabulary of zones is simply shorthand. I don't see any advantage in spending a lot of time trying to define and empirically locate the boundaries between zones because I understand the core/periphery hierarchy as a complex continuum...For me it doesn't matter whether there are "really" tree zones, four zones or twenty zones.

Regarding the dispute on the activities distinguishing the various strata, he basically concurs with the Schumpeterian definition of core activity based on entrepreneurial innovation and development of new activities. He defines core activity:

as a certain kind of production, the production of relatively capital intensive commodities (core commodities) which employ relatively skilled, relatively high paid labor...a core area is an area in which relatively capital intensive production is concentrated.⁵¹

Dezzani (2001) in order to capture the distinctions among the world economy classes selected a number of classification variables covering a wide spectrum of economic activities (investment, total reserves, exports-imports, GDP etc.) and using data from 85 countries over ten-years periods (1960s, 1970s, 1980s and 1990s) concluded that in 1960 the core states were simply the wealthier states as determined by internal conditions (e.g. surpluses of capital, high productivity and export rates), while *by 1990, the world economy classes are increasingly* distinguished by trade rather than internal economic characteristics. He also proposed OPEC countries as a different stratum (class) in the system representing a statistical bifurcation from the periphery. According to Dezzani:

The term world system has come to mean a mode of inquiry or a perspective for viewing the social political and economic behaviors of countries, groups of countries, and portions of countries in such a way that these elements are assumed to belong to a larger, integrated global system. This framework describes a situation where many countries operate in the context of a single world economy.⁵²

ON HEGEMONY

Ancient Athens, the first empire with a democratic state apparatus, was a regional hegemon⁵³ the 5th century BC Mediterranean world-economy⁵⁴. The source of its power was its navy, its culture and its political system (distribution of power, merits and wealth among the members of the Athenian *Demos*) but primarily the money contributions from the members of the Delian League, the ancient world NATO, in order to ‘*keep the Athenians In, the Persians Out and the Spartans Down*’⁵⁵. Pericles the founding father of Imperial Athens, in his Funeral Oration at the end of the first year of the Peloponnesian War (431-404 BC) emphasized to the Athenians the necessity of maintaining their hegemony:

...you should not think that you are fighting for freedom or subjugation, but you are fighting so you will not be deprived from the power that you possess... You exercise your hegemony like tyranny, the obtainment of which is considered unjust, but the resignation from it would be dangerous⁵⁶.

The proto-realist Thucydides, in the Melian Dialogue leaves no doubt of what hegemony means, when the Athenians argue:

... and since you know that in relations among humans, legal arguments have value when the parties who invoke them are just about equal in power, while he who possesses the power imposes his will to the extent that his power allows him to do, while he who is weak gives ground according to his weakness... Your animosity cause us less harm than your friendship, because the latter could be interpreted as a prove of our weakness while your hatred, constitute in the eyes of all who we dominate, a proof of our strength.⁵⁷

Wallerstein argues, that the hegemon is not enough to be stronger than the other states, but significant stronger than the other strong states. In this case the state-promoted enterprises enjoy advantages ‘*not accorded by the market but obtained through political pressures*’⁵⁸. A thesis that adheres to Luttwak’s state-centric geoeconomic logic (see supra).

The Offensive Realist Mearscheimer distinguishes a great power from a hegemon and argues that ‘*a hegemon is a state that is so powerful that it dominates all the others*

states in the system...In essence, a hegemon is the only great power in the system'. Chase-Dunn, distinguished four conditions that contribute to hegemony: (1) Geographical location, (2) Advanced Technology, (3) Existence of investment capital sufficient to develop new types of production and (4) Human Capital, that is labor with skills relevant to the new type of production.⁵⁹

THE GEOECONOMIC NETWORK

In the world-system analysis as presented, one could detect three imperfections: (i) excludes the formal *au-delà*-the-Iron-Curtain economies, which now constitute a dynamic component of the world economy (ii) disregards the capital flows. In this respect, Ohmae speaking of the Foreign Exchange (FX) empire he revealed that as early as 1988, the total volume of flow of goods within the Triad amounted to \$600 billion *annually*, while the *daily* volume in FX trading amounted to \$600 billion *daily*⁶⁰ (iii) the country row data used in the models need to be updated and (iv) that the point of reference is the country/state, because at the time when system-analysis theories were developed, the State-designed balance of power of the Cold War left little room for other protagonists in the system.

The notion of the State itself has been evolved through time. According to Kjellen - the Swedish jurist who fathered the neologism "geopolitics" - from geopolitical point of view a State formation is viable when it congregates: sufficient land mass, freedom of movement and internal coherence⁶¹. Regarding the qualifying characteristics of a State, in **Annex...** are presented a number of Geo-political Parameters according to the writers perception (the sovereignty is described according to Krasner⁶²).

On the issue of the role of the nation-state in the post² Cold War era Kenichi Ohmae described the creation of ILE (Inter-linked Economy) of the Triad, which included basically the United States, Europe and Japan. In this frame he added to his strategic triangle of Cs - Customers, Competitors and Company- two more Cs - Country and Currency and urged the New MultiNational Enterprises (MNEs) to adjust their strategy accordingly. On the 'country variable' he declared that the intervening government belongs to the 'preconsumer' era and sitting on the other side of the hill from Luttwak he argued:

The government's role, then is to ensure that its people have a good life by ensuring stable access to the best and the cheapest goods and services from anywhere in the world - not to protect certain industries and certain clusters of people...a modern government's concern is *jobs*⁶³.

He underlines, that the ever increasing of movement of the four *Is* (Investment, Industry, Information technology and Individual Consumers), makes the middleman

role of nation-state obsolete. He suggests that the decline in the relevance of nation-state as units of economic activity is giving ground to the emergence of *region-states*. In this regard Ohmae concurs with Sparke in removing the nation-state as the primary agent of economic activity and replacing it with the *region state*, thus moving toward a network architecture. On this issue, Sheppard argued that global city-regions now “*constitute a mosaic that is beginning to override the core-periphery relationships*”.⁶⁴ Chase-Dunn enters also into this crucial debate: ‘*What is the unit which can be designated as engaging in core of peripheral activities?*’ He clearly excludes the firm and the nation-state and he advocates the *region* as the ‘*unit of coreness or peripherally*’⁶⁵.

From the almost rigid and stable stratified core-periphery-semiperiphery architecture of Wallerstein, world-system analysis theorists have gradually moved to a more fluid non-stratified and unstable *geoeconomic network*. The relations between the components of the system are evolving from *dependence* and *exploitation* to *interdependence* and *resource sharing*. Of course the stronger and the weaker are still present but in essence in the geoeconomic network, is nearly impossible to exist Mearscheimer’s *only great power*, Wallerstein’s unique *strongest of the strongest*, Thucydides’s *absolute-right-of-the strongest* actor or Chase Dunn combination of conditions in a unique SSE. The logic of the geoeconomic network is the multiple-particles SSEs cores as part in a network of interdependency.

Pascal Lorot underlines that the goal of geoeconomic policies are not the control of land (in contrast with geopolitics), but technological and commercial supremacy. He expands Luttwak’s perspective and globalizes the notion engulfing emerging Asiatic and Latin America States⁶⁶. He includes also multinational enterprises as geoeconomic strategists. The geoeconomic network, dictates the enlargement of the perception of geoeconomy in order to include also other agents and actors, which could be aggregated in one unified category called *State Scale Entities (SSEs)* in the modified world economy structure as shown in *figure 1*.

STATE SCALE ENTITIES (SSEs)

According to Wallerstein, “*Capitalism was from the beginning an affair of the world-economy and not of nation-states*”⁶⁷. The *State Scale Entity (SSE)* represents the evolution of Nation-State and/or the Multinational Enterprise (MNE) as the main agents of transnational economic activity. In this study, this evolution of the state is not discussed through the prism of Marxist theory, which declared the gradual abolishment of the state as an organization of the entire people, but rather as a process necessary in decoding the new geoeconomic reality.⁶⁸

From the International Law’s point of view, Article 1 of the Montevideo Convention (1933) stipulates that “*The State as a person of international law should possess the following qualifications: (a) a permanent population; (b) a defined*

territory; (c) government; and (d) capacity to enter into relations with other states. In other words: Population, Ground, Government and Interaction. Today, the perception of these four State characteristics has evolved respectively to Human Recourses, Markets - Consumers, Hierarchic Governance and Projection of Power. The SSEs have a State-like apparatus, in terms of structural complexity, but with the exception of States, which are themselves a category of SSEs, they don't necessarily control land and they may transcend physical national borders. The geoeconomic operations they conduct, result in a significant economic and financial direct or indirect impact on a strategic (macroeconomic) scale. In order to achieve their geoeconomic objectives they should possess certain characteristics in terms of *human recourses, organization, funding and modus operandi.*

The human resources of a SSE comprises of a combination of 'blue' and 'white collars' Highly skilled, trained and educated personnel is necessary in order to face the requirements of demanding organizational functions such as complex financial operations⁶⁹, production, legal and logistic support and last but not least economic intelligence. The recruitment could be in voluntary basis or not⁷⁰. The development of an organizational culture is mandatory. *The Organization* is strictly hierarchical, with a centralized authority enabling central planning and decision-making or independent-cell structure. In order to have the flexibility and agility to conduct independent geoeconomic operations. *The funding* could be open or covered/illegal e.g ISIS self-funding⁷¹ or Al-Shabaab's "charcoal for sugar" trade cycle⁷². Their *Modus Operandi* targets at the ability to project power and influence. In the case of states, the non-state SSEs, headquartered in them, represent instruments of national power and pride. The market penetration could be product-based market (multinationals) with the ability to adapt to changes in regulatory frameworks vs power-based, where SSEs cannot be forced to negotiate unless they are overpowered or their resources are depleted (ISIS). Their actions affect the long or short-term macroeconomic and microeconomic global environment of other SSEs or at least exercise significant influence on them. Consequently, I call a ***SSE any entity with State organization and international conduct, whose size and resources allow it to be capable of implementing independent "policy" actions that project market power and influence at a regional and global level.*** In geopolitics the constituent unit of analysis is the nation-state while in geoeconomics the SSE.

I now proceed to the taxonomy SSEs that are divided in States and Non-State (NoSSEs) as shown in *figure 2*. In the first category fall the *Command States* and the rest of the States which for lack of a more suitable term I call *Globalized States*. *Command States* include States where the government exercises almost unlimited and unchallenged authority e.g North Korea, Cuba or China - at least for the time being. The November 2014 North Korea-Sony Entertainment affair of «*SonyLeaks*» constitutes an example of how a *Command State* conducting an *offensive geoeconomic*

operation forced a SSE like Sony to finally capitulate. Globalized States category encompasses the vast majority of States that have, in different degree each, embraced globalization and thus the government exercise a moderate role. Under the category of the NoSSEs fall the Multinational Corporations (MNCs), the State Owned Enterprises (SOEs) and the *State-Mimicking* SSEs. The last category includes a number of State-aspiring ethnic group-based organizations like ISIS in Iraq and Syria, Hezbollah in Lebanon and UÇK/KLA in Western Balkans. The multinational or transnational enterprises (MNEs) “*are enterprises that engage in foreign direct investment (FDI) and own or, in some way, control value-added activities in more than one country*”⁷³. The SOEs play a vital role in countries like China and Russia where state capitalism drives the economy. As noted in *The Economist* on April 25, 2015, Gazprom defending itself against a recently EU market abuse allegations claimed that it enjoys “*special, socially significant functions...and the status of a strategic government-controlled business entity*”. In fact, the monopolistic strategy of this Russian gas-giant in relation with the geoeconomic factors (incremental competition, distance and economy of scale of pipelines and available investment capital) regulating the oil and gas ecosystem has established Russia as a natural gas superpower. Which is not the case for oil, where the absence of a unique geoeconomic agent enfeebles Russia status in regional and global energy market.⁷⁴

Digit SSEs are companies like Google, Facebook or Microsoft, who although multinationals by nature, the ecosystem they created makes them a *sui generis* category of SSEs and will be examined in a research field of geoeconomy which I call **Digital Geoeconomics** or **Digeonomics**. *Digeonomic* operations take place primarily in the realm of cyberspace and acquires for that matter a number of unique characteristics. By exploiting the “network effect”, they grow and expand with a rate that “traditional” brick-and-mortar companies only dream of. They accelerate what Bill Gates called the *positive feedback cycle*, after crossing rapidly the *acceptance threshold*⁷⁵. The Internet, their area of operation par excellence, allows them to bypass traditional regulation/tariff barriers much easier. They disrupt established markets ethics and operations by, for example, reexamining the “vices” of monopoly (e.g. Microsoft and Google cases) in favor of a fully dynamic Schumpeterian innovation.

Digital Geoeconomics is not just about digital economy. It aspires to provide a decoder of the Fourth Industrial Revolution (4IR), a term introduced by Klaus Schwab and discussed extensively for the first time in the 2016 World Economic Forum Annual Meeting. According to Schwab, digital revolution began as the *third industrial revolution* in the 1960s⁷⁶ and catalyzed by mainframe computing, personal computing and the Internet. A few of the characteristics of 4IR will be (1) connectivity in world system scale, mostly with handheld computes (or *phablets*), (2) unprecedented processing power, storage capabilities and knowledge access via technologies like Artificial Intelligence (AI), the Internet of Things (IoT), nanotechnology,

biotechnology and quantum computing and (3) fusion of these technologies and their interaction across the physical, digital and biological domain. According to Schwab, the distinction of third and fourth revolutions lies in three reasons: (1) *Velocity*: Evolution at an exponential rather than linear pace (2) *Breadth and depth*: It will not only change the 'what' and the 'how' of doing things but also the 'who' we are. (3) *Systems Impact*: The transformation of the entire world system⁷⁷. From classic white and blue collar workers to Ohmae's steel collars (robots), we are entering the era of *no-collar* workers (digital productivity, emigration to the cloud). The Digital SSE will be the carrier particle of the 4IR.

In a global security environment characterized by "*the failure or collapse of the Westphalian system of Weberian states...and the state loss over the monopoly on the legitimate means of violence*"⁷⁸, *State Aspiring SSEs* are organizations founded in ideological - religious or ethnical - platforms, most frequently characterized by the international community as terrorist groups, possessing the distinctive characteristics of an SSE. The fundamental differences, distinguishing them from conventional terrorist groups or criminal organizations, is that they pursue the control of *physical territory* where they can deploy their state-like apparatus and their direct or indirect economic activity has achieved the critical mass required to influence macroeconomic indicators in regional or global level. *State Aspiring SSEs* will be examined in a research field of geoeconomy, which I call ***Defense Geoeconomics***.

State Mimicking SSEs existed throughout history in many forms. The British French and Dutch East India Companies (V.O.C.) controlled the European commerce with the East for two centuries.. The British East India Company was one of the first joint-stock companies in the world and by 1803 it possessed a private security force of around 260.000 - twice the size of the British army - and marshaled more firepower than any nation state in Asia⁷⁹. In a regional level, the Hudson Bay Company (HBC) controlled the fur trade in North America and introduced the Made Beaver as the currency of the fur trade. The V.O.C.⁸⁰ which also minted and circulated its own coins⁸¹, in 1691 had about 160 ships on its books with 30 to 60 cannons apiece, and in time of war the Company could add another 40 ships in its number. In 1788 it had a payroll of 150.000 persons⁸². The Hanseatic League, which reached its peak triumphing over the king of Denmark by the Treaty of Stralsund (1370), was an early SSE and according to Braudel :

The solidity of the Hansa came from the community of interest it stood for, from the need to play the same economic game based on common interests, from the common civilization created by trading ...and lastly from a common language which made no small contribution to the unity of Hansa...It was the language of 'a power elite and a wealth elite, implying membership of a defined social and professional group'.⁸³

An early SSE with religious affiliation to Islam during the 16th and 17th centuries, were the Barbaric corsairs. As justification for their predatory actions at the coastal regions of the Mediterranean they claimed the 'eternal war' between Christendom and the lands of Islam. They operated from Algiers as their principal base, within a legal framework and they constituted the naval vanguard of the Ottoman Turks in their strategy of acquiring naval superiority in the Mediterranean. Nowadays, Somali pirates see themselves as heirs and daring descendants of this organization⁸⁴. In the case of the Barbaric corsairs, their organization, with the exception of a few strongholds did not controlled land, but the equally (or more) important for the economy of the Mediterranean world-system, sea lanes.

The role in history of the SS, is more than Hitler's instrument of lightning terror. The concentrations camps gave the SS access to an unlimited supply of slave and expendable labor. The grip in all German economic activities in combination with the economic exploitation of conquered lands form farming and stockbreeding in Poland to forestry, mining and fishing in Russia gave to the organization a considerable wealth. The organization eventually controlled over 550 factories, producing 75% of Germany's soft drinks and 95% of the countries furniture. The SS run among others, quarries, armaments, cement factories, bakeries, food research establishments and a publishing house⁸⁵. Himmler even acquired a porcelain factory (at Allach near Munich) with which, using among others Dachau inmates, tried to promote internationally the 'refined Nazi' art⁸⁶.

The SSEs are themselves in the globalized environment, one of tree categories of agents of economic activity in the global geoeconomic system.

As shown in *Figure 3*, at the basic level lies a swathe of micro, small and medium size actors like small private-own firms, independent entrepreneurs and organizations with a size (economic footprint) below a Critical Geoeconomic Mass (S^*) called Sub State Actors (SSAs). When their size surpasses S^* and a *Geoeconomic Threshold* (m^*), then the SSA transmutes to an SSE. The third category of agents of economic activity are the **Hyper State Entities (HSEs)**, which comprise mainly international or regional Organizations - including the so-called 'Washington Concession' elements (WTO, IMF, World Bank) - and association of States⁸⁷ and Alliances, e.g United Nations, OSCE, NATO. They are inter-state Organizations in regional or global level that apply their influence by facilitating or regulating directly or indirectly the economic activity. HSEs also include self-organizing phenomena⁸⁸ like financial markets and stock exchanges. I parallel the positionality of HSEs in the global geoeconomic system with the role of the Government and State in the *Ordo-liberal* theory i.e as guarantors of legitimate economic activity leading to economic growth⁸⁹. For example, the 'aggressive' regulatory function of the European Union, an

HSE, is evident in anti-trust cases involving Microsoft (2009), Gazprom and Google (2014).

In understanding this new geoeconomic construction, the development of an explicative model is required. This model will have to describe the qualifying parameters that designate the evolution from the State to the SSE and generate the 'separation' between the various entities. The qualifying characteristics selected in Appendix I are separated in Geo-political Parameters and Geoeconomic Variable [G(t,s)] Parameters. The ranking of the Geo-political Parameters has been conducted by the writer of this study taking into consideration a survey among a number of leading International Relation experts. The Geoeconomic Influence Variable [G(t,s)] describes the influence of certain classic geoeconomic parameters over time and space (par. 9 to 12) and the 32 Deep Shifts expected during the 4IR, according to Schwab

ECONOMIC IMPACT OF CONTEMPORARY SSEs

DIGITI SSEs

Digiti SSEs provide digital platforms for IT firms (tech-SSAs) for a (admittedly limited) number of start-ups to cross very fast the m^* and emerge as *Digiti* SSEs and fast growing SSEs, or be acquired by takeovers from the platform-providing SSE. *Digiti* SSEs achieve profitability with much lesser (although highly educated, highly skilled) human resources. The profits per 1.000 employees, for *Digiti* SSEs, as shown in *Figure 4*, were in 2013 much higher in comparison with conventional MNC.

By investing in technological advanced infrastructure (necessity of high tech «highways»), *Digiti* SSEs contribute to growth and development. They do not just disrupt but redefine the established economic model by changing the structure and mode of operation of traditional market sectors, from e-commerce to crowdfunding. For example, Google provides programmers for free, with a software development kit (Android SDK), in order for them to build applications for its mobile operating System. In the same frame, as of March 25, 2015, Facebook listed on its *newsroom* website that it opened the code to its mobile application *Messenger* by launching *Messenger Platform* and announced *Businesses on Messenger*, in order to allow other software developers to use this application as a platform. As noted in *The Economist* on November 29, 2014, although this strategy goes with strings attached (if the device manufacturers want their users to have access to Google Play—Android's app store—they need to give Google's mobile apps a particular prominence), it nevertheless constitutes a disruptor in digital market operation. Other illustrative examples include iTunes/store-music, Kindle/iBooks-bookstores, Uber-Taxiservices and Udacity-On line education/training.

Digiti SSEs have a *Vertical Effect* on society, regulating and occasionally controlling every aspect of economic activity from top to bottom. From stock-exchange

indexes and corporate activity to lifestyle (e.g. social media) and daily financial transactions (e.g. web-banking). They lead the transformation toward the ‘*thumb consumer economy*’, where almost every daily economic transactions, like banking and commerce can be performed using only the thumb. They created the path from Personal Computers to handheld computers (or *phablets*), via smart phones and tablets and from floppy disks to cloud computing. In digital transaction, emphasis is given to the collection of consumers’ data regarding their consumption habits in order to be exploited by marketing firms. Furthermore, through multiple applications, they also provide everyday (e.g. transport-Uber, cooking-SpoonRocket) or specialized (medical care-Medicast, legal-Axiom) on-demand services promoting a business model where “*job-starved workers provide for time-starved urban professionals*” as noted in *The Economist* on January 3, 2015. In addition applications such as Apple Pay, Android Pay or CurrentC aspire to integrate consumer payment to mobile or *wearable* devices.

Digiti SSEs represent a business model of *Horizontal Expansion*, extending their business portfolio in sectors far from their primary commercial focus but in the frame of a strategic vision. Facebook according to its head of Connectivity Lab, by acquiring the drone maker *Ascenta*, aspires via a solar-power drone fleet to “*reach a point where everyone on the planet gets the same message at once*”⁹⁰. Google pursues the same strategy with its “Project Loon” and a network of high-altitude balloons⁹¹ or, Space X with a constellation of low-weight Internet satellites, as noted in a *Wall Street Journal* article on November 7, 2014. Additionally, they exercise phenomenal asymmetric market power. For example Facebook Inc - with 1,49 billion active users in the second quarter of 2015 - and Twitter Inc, while dominating and changing society, they are not even listed in the 500 biggest companies globally.

Digiti SSEs are also a representative example of *smart power*, which Joseph Nye defines as ‘*learning better to combine the hard and soft power*’⁹². As noted in a *Fortune Magazine* article on March 15, 2015, Google Inc. is the best company to work for while Apple Inc, Google and Amazon.com are 3 of 4 most admired companies⁹³. It is the first time in human history, when a number of the most influential MNC provoke not hate or distrust but the notion of “*fun*”.

Apple Inc. represents a case study. It disrupted music industry in 2001 with the iPod, introduced mobile computing with iPhone (2007) and iPad (2010) and its venture in wearables (Apple watch) is on the move. Mid May 2015 had a market valuation of \$741 billions more than double that of either Exxon Mobile or Microsoft and in grasp of \$1 trillion. As noted in *The Economist* on January 31, 2015, from the introduction of iPhone 6 on September 6, until the end of 2014, 74,5 million iPhones were sold (34.000 every hour of every day). As of January 27, 2015, Apple listed on its website that in Q4 of 2014 the company announced a revenue of \$74,6 billion and \$18 billion earnings, while the company is making ambitious plans of *Horizontal Expansion*. As of February 19, 2015, *Bloombergbusiness* listed on its website discussions for the acquisition of

Elon Mask's Tesla Motors.

STATE ASPIRING SSEs

After the systemic changes produced by the so-called 'Arabic spring' we attest the transformation of territorial states like Iraq, Libya, Syria or Nigeria, into a No-State condition. Rogue states or not something new but No-States are. State Aspiring SSEs operate in the vacuum created by this phenomenon. They constitute a completely different category of Contemporary *SSEs* but nevertheless they possess the distinctive four characteristics of State Scale Entities (human resources, organization, funding and modus operandi). They threaten the regional (and occasionally global) economic stability by causing insecurity. In this context, economic activity dysfunctions, FDI flee or are discouraged and productivity plunders. On the other hand, the allocation of an increasing volume of resources to security in order to protect natural resources, infrastructure and operations, burdens budgets with non-productive activities.

The so-called Islamic State (ISIS) represents a case study in the category of *State Mimicking* SSEs. ISIS in just three years from an unknown branch of Al Qaida in Iraq, became according to David Cohen U.S. Treasury Under Secretary for terrorism and financial intelligence «*the best-funded terrorist organization we've confronted*». Matthew Levitt, director of the Stein Program on Counterterrorism and Intelligence at the Washington Institute for Near East Policy, calls ISIS «*the best-financed group we've ever seen*». In terms of organization ISIS has developed internal structures dedicated to maintaining financial self-sufficiency and an independence from potentially vulnerable external donors⁹⁴. According to Mr. Cohen "ISIS depends on complex management networks, with CFO-like figures and professional administrators who allocate and monitor the group's money top-to-bottom". In November 13, 2014 the *Council of the Choura*, a consulting body of the organization, announced via the blogosphere that ISIS was preparing to launch a currency "dedicated to God" in gold, silver and copper and its value will be the purchasing power of its metal. By doing so, the group offers Muslims a way out of the "global economic system that is based on satanic usury".⁹⁵

The constant security threats in ISIS's areas of operations maintains armaments spending in extreme high levels. Funds urgently needed for humanitarian relief and basic state-provided services are tunneled to the war effort as shown in *figure 5*. Between 2011 and 2014 defense spending in MENA (Middle East and North Africa) spending increased by 29,6% from \$108 billion to \$140.3. As noted in an *IHS Jane's* article on February 25, 2015, military budgets in the area now account for 8.8% of the global, compared with 6.9% in 2009. Oman with a 14,1% average from 2012 to 2014, scores the highest globally⁹⁶. The numbers are inflated also due to the widely spread corruption. As noted in an *IHS Jane's* article on December 17, 2014, according to Iraq's

prime minister the estimated number of ghost soldiers in the Iraqi military's payroll were 50.000 with an annual cost of \$380 million. Furthermore, as noted in an *IHS Jane's* article on February 18, 2015, the US led military campaign against ISIS since August 2014, translates into a considerable cost to the coalition parties. In that frame, the Obama administration seeks US Congress approval to extend the Authorization for Use of Military Force (AUMF) first voted in 2001 by the Bush Administration as a financial tool in the «war against terror».

CONCLUSIONS

Although a unique definition is neither possible nor useful, a methodical analysis and the evolution of *Geoconomia* into a clearly defined framework of economic research could prove itself useful in the contemporary world-economy. The heuristic device presented in this paper is the first step to a in-depth historical analysis and to a comparative case studies examination. Taking into consideration the aforementioned, I call *Geoconomia, the organized interaction between State Scale Entities (SSEs) across physical and digital borders and in the frame of a multi-core world economy, in order to acquire: (a) control of natural, human and digital resources and (b) influence on the financial environment and market composition, in such a measure that can affect their own macroeconomic outlook and that of other SSEs*. The purpose of geoeconomic operations conducted by SSEs is to conquer the *Commanding Heights* of the (regional or/and global) economy, a term analyzed by Yergin & Stanislaw⁹⁷. Or simply expressed and replacing *Geography* with *Economy*, in the aforementioned *Encyclopedia Britannica's* definition: geoeconomy is '*the use of the Economy by State Scale Entities practicing a policy of market power*'. On its relations with geo-politics, I underline that *Geoconomia is more than the economy with geopolitical-vision goggles*. This relation has been often instrumentalized like in the case of *Geo-politics of fear vs Geoeconomics of Hope* of the Golf War II⁹⁸.

The enlargement of the perception of classic geoeconomy, in order to include also other agents and actors to an aggregated category called SSEs has been dictated by the contemporary world geoeconomic system. Their taxonomy (States, Command States, Globalized States and NoSSEs), covers the full spectrum of global economic activity and in a first level constitutes a basis of observing, codifying and analyzing their distinctive mode of operations. In a second level a method could be developed in order to standardize the different phases and understand their real-time changes. Apart from the «classical» conduct of geoeconomics operations, focus should be given to the research fields of *Defense Geoeconomics* and *Digital Geoeconomics*.

All things considered, a clear line of distinction must be drawn between *theoretically formulated* ideas about geoeconomics and *field-geoeconomy*. As Sparke observed in a e-mail addressed to me, Sep. 1, 2015 : '*distinctions and contrasts [must*

be made] between the intellectual formulations of 'geoeconomics' on the one side and the material development of geopolitical-economy on the other side. The latter may well be shaping and driving the use of theories and discourses such as those propounded by Luttwak, Ohmae and Friedman, but the theories and discourses of these and other writers remain ideas that exist at a remove (a quite radical remove in some cases) from what is actually happening on the ground'.

Achieving economies of scale is a basic objective in economic activity and a fundamental principle of geoeconomic operations. This applies especially to relatively small and fragmented internal-oriented economies like the Greek one. Borrowing Luttwak's military spirit, major geoeconomic operations require major geoeconomic formations like the SSE.

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⁵⁰ D.A. Smith and D.G White, 'Structure and Dynamics of the Global Economy: Network Analysis of International Trade 1965-1980', Social Forces, 70/4 (1992) pp. 857-893

⁵¹ C. Chase-Dunn (note 35) p. 207

⁵² R. J. Dezzani, 'Classification Analysis of World Economic Regions', Geographical Analysis 33/4 (2001) p.331.

⁵³ As defined by Mearsheimer in J.J. Mearsheimer , The Tragedy of Great Power politics (New York: W.W. Norton & Company 2001), 2014 Edition, p. 40.

⁵⁴ The term 'world-economy' as defined by Braudel. F. Braudel (note 66) p. 22

⁵⁵ Paraphrasing Lord Hastings Lionel Ismay, British NATO Secretary general (1952-1957): «*To keep the Americans in, the Russians out, and the Germans down*»

⁵⁶ Thucydides, Peloponnesian War, (note 5) Book B (63) p. 164

⁵⁷ Ibid, Book E' (89, 98) p. 164

⁵⁸ I. Wallerstein The Modern World-System. Vol II. Mercantilism and the Consolidation of the European World-Economy, 1600-1750. (Berkley: University of California Press 1980). 2011 Edition. p. xxii.

⁵⁹ C. Chase-Dunn (note 35) p. 74-75

⁶⁰ K. Ohmae, (note 30) p. 157

⁶¹ R. Kjellen, Der Staat als Lebensform (The State as Life Form) 2nd Edition (Leipzig: S. Hirzel 1917) in G. Alexiades (note 17)

⁶² S. D. Krasner, Sovereignty: Organized Hypocrisy (New Jersey: Princeton University press 1999)

⁶³ K. Ohmae, The borderless world: power and strategy in the interlinked economy. (USA: McKinsey & Company, Inc. 1990) pp. 2-15

⁶⁴ He also introduced *Wormhole Geographics* where *Positionality* outweighs by far the Cartesian geography and supports that "The positionality of two places should be measured therefore, not by the physical distance separating them, but by the intensity and nature of their interconnectedness". E. Sheppard 'The Spaces and Times of Globalization: Place, Scale, Networks, and Positionality and Conditions' Economic Geography, 78/ 3 (2002) pp. 307-330

⁶⁵ Ibid, p.208

⁶⁸ K. Ohmae, The End of the nation State: The Rise of Regional Economics. (New York: The Free Press 1995)

⁶⁹ Including black-market banking system, "Deep Web" financial operations.

⁷⁰ Case of terrorist or organized crime organizations.

⁷¹ D. Stergiou, 'ISIS Political Economy: Funding a Terror State', Journal of Money Laundering Control (forthcoming 2015).

⁷² UNSC, Report of the Monitoring Group on Somalia and Eritrea (S/2011/433); UNSC, Report of the Monitoring Group on Somalia and Eritrea (S/2014/726)

⁷³ J. H. Dunning, & S. M. Lundan, *Multinational Enterprises and the Global Economy* (Cheltenham: Edward Elgar Publishing 2008) p. 3.

⁷⁴ A. Stulberg, 'Moving Beyond the Great Game: The Geoeconomics of Russia's Influence in the Caspian Energy Bonanza'. *Geopolitics* 10 (2005) pp. 1-25

⁷⁵ B. Gates, *The Road Ahead* (London: Viking 1995) p. 45-47.

⁷⁶ The first industrial revolution took place in 17th and 18th centuries, ushering in mechanical production. The second industrial revolution, in the 19th and early 20th century, fostered by electricity and Fordist assembly line production, made mass production possible. K. Schwab, *The Fourth Industrial Revolution* (Geneva: World Economic Forum 2016).

⁷⁷ Ibid.

⁷⁸ M. Schuberth, 2015. 'The Challenge of Community-Based Armed Groups: Towards a Conceptualization of Militias, Gangs, and Vigilantes' *Contemporary Security Policy* 36/2 (July 2015) pp. 296-320. doi:10.1080/13523260.2015.1061756.

⁷⁹ W. Dalrymple, 'The East India Company: The original corporate raiders.' *The Guardian*. 10.4.2015, available at <<http://www.theguardian.com/world/2015/mar/04/east-india-company-original-corporate-raiders>> , accessed 12 Sep. 2015.

⁸⁰ The V.O.C. is even mentioned by Kenichi Ohmae as a representative example of an exploitative MNE. K. Ohmae (note 30) p. 177.

⁸¹ T. Desikachari, *South Indian Coins*. (New Delhi: Asian Educational Services 1991) ; W. O. Dijk, 2006. *Seventeenth-century Burma and the Dutch East India Company, 1634-1689* (Singapore: Singapore University Press 2006) p. 182 ; E. Thurston, *History of the Coinage of the Territories of the East India Company in the Indian Peninsula and Catalogue of the Coins in the Madras Museum* (New Delhi: Asian Educational Services 1992)

⁸² F. Braudel 'Civilization and Capitalism 15th-18th Century Vol III: The Perspective of the World' (London: Collins/Fontana Press 1988) p. 103-4

⁸³ Ibidem, p. 224.

⁸⁴ A. G. Jamieson, 'Lords of the Sea: A History of the Barbary Corsairs', (London: Reaction Books Ltd 2012) pp. 11-14.

⁸⁵ R. Lumsden and P. Hannon, 'The Allgemaine-SS' (London: Men-at-Arms-Series, Reed International Books Limited 1993) p.8

⁸⁶ G. Williamson, 'The SS: Hitler's instrument of terror' (London: Sidgwick & Jackson Limited 1994). p. 96

⁸⁷ Langhorne defined the concept of association of States as '*three or more states that consult regularly in a formal fashion requiring membership*'. R. Langhorne, 'The Diplomacy of Non-State Actors' *Diplomacy & Statecraft* 16/2 (2005) pp. 331-339. doi: 10.1080/09592290590948388.

⁸⁸ Ibid, p. 335.

⁸⁹ T. Lemke 2001. 'The birth of bio-politics': Michel Foucault's lectures at the Collège de France on neo-liberal governmentality' *Economy and Society* 30 (2001) pp.190-207. doi: 10.1080/03085140120042271.

⁹⁰ Q. Hardy & V. Goel, 'Drones Beaming Web Access Are in the Stars for Facebook'. The New York Times, 26.3.15 available at <<http://nyti.ms/1EW98tt>> accessed 02 Feb. 2016.

⁹¹ B. Soloway, 'Can Google's fleet of high-altitude balloons bring the Internet to the World's unconnected?' Foreign Policy Magazine, 31.7.2015. Available at <<http://foreignpolicy.com/2015/07/31/can-googles-fleet-of-high-altitude-balloons-bring-the-internet-to-the-worlds-unconnected/>> accessed 02 Feb. 2016

⁹² J. Nye (note 4) p. 32.

⁹³ 'The Worlds Most Admired Companies' Fortune Magazine 1.3.2015 p. 48.

⁹⁴ C. Lister, 'Cutting off ISIS's Cash Flow. Brookings Institution, 24.10.2014 available at <<http://www.brookings.edu/blogs/markaz/posts/2014/10/24-lister-cutting-off-isis-jabhat-al-nusra-cash-flow>> accessed 12 Sep. 2015

⁹⁵ Detailed analysis regarding ISIS funding, in D. Stergiou (note 45)

⁹⁶ SIPRI Military Expenditure Database, available at <http://www.sipri.org/research/armaments/milex/milex_database> accessed 02 Feb. 2016

⁹⁷ D. Yergin & J. Stanislaw, The Commanding Heights. The Battle for the World Economy. (New York: Simon & Schuster 2002)

⁹⁸ M. Sparke (note 36)

For future use

- Hezbollah has even constructed an airstrip in Lebanon for its unmanned aerial vehicles (*IHS Jane's*, April 29, 2015)

- The Q for the future is : Is geo-eco replacing geo-po? What will matter most? the bullet leaving the firearm or the mobile application that costs \$0,99
- Mapping the SSEs
- Apple university; Geo-economics in tertiary education.
- An a SSE must be scalable –able to grow rapidly-via Venture Capital (VC) investment, or rich individuals called «angels».
- In the US, the startups with a chance of making really big each year number around 15. (*The Economist*, May 16, 2015)
- Ten commandments of Geo-eco :
 - Co-operation, join effort : The cost of R&D, marketing is challenging high. Apple's main supplier of microchips for its iPhones is Samsung (*The Economist*, May 23, 2015)
- the commerce of client data (subscriptions) for marketing purposes

- The SSEs are curving geoeconomic space