

# **Economic Warfare and Dominance Expectation Theory**

Ulrich Blum

The world financial crisis after 2007 has given rise to a more belligerent economic vocabulary. Economic Warfare has become a weasel word in journalism and politics, especially since the strategic economic rivalry between China and the US climaxed.

I distinguish between competition and economic warfare as the two faces of economic rivalry. Derived from the military, I provide a clear definition and relate it to other types of warfare that are included in the world of hybrid warfare. I continue by providing a rigorous micro-economic foundation of economic warfare. In a dynamic world, motivation to enter an economic war may depend on expectations regarding the development of future strategic considerations on the economic and the geopolitical performance of other nations – or enterprises. I propose an overarching theory of dominance expectations that encompasses ideas as expressed in Thucydides-Trap arguments or continental-maritime-rivalries. Finally, I point out that economic warfare may be conceptualized as a basic starting point for hybrid warfare, as military warfare has been for a long time. Anecdotal evidence is used to underpin these ideas.

Key words: Economic Warfare, hybrid warfare, dominance, allocation

# **Wirtschaftskrieg und Dominanzerwartungstheorie**

Ulrich Blum

Die Weltfinanzkrise nach dem Jahr 2007 hat zu einem kriegerischen Wirtschaftswortschatz geführt. Wirtschaftskrieg ist zu einem Wieselwort in Journalismus und Politik aufgestiegen, während die strategische wirtschaftliche Rivalität zwischen China und den USA ihren Höhepunkt erreichte.

Ich unterscheide zwischen Wettbewerb und Wirtschaftskrieg als zwei Gesichter wirtschaftlicher Rivalität. Abgeleitet aus dem Militärischen gebe ich eine klare Definition und stelle auch eine Beziehung zu anderen Arten der Kriegsführung her, die als hybrid bezeichnet werden. Ich ersetze die Definition des Wirtschaftskriegs mit einem formalen mikroökonomischen Ansatz. In einer dynamischen Welt kann die Motivation, in einen Wirtschaftskrieg einzutreten, von der Erwartungsbildung in künftige wirtschaftsstrategische und geoökonomische Position anderer Länder – oder Unternehmen – abhängen. Ich schlage eine übergreifende Dominanzerwartungstheorie vor, welche auch solche Ideen einbezieht, die in den strategischen Diskurs als Thukydides-Falle oder als Kontinent-Maritim-Rivalitäten eingegangen sind. Ich weise abschließend darauf hin, dass die Wirtschaftskriegsführung als grundlegender Ausgangspunkt für die hybride Kriegsführung gedacht werden kann, wie dies die Militärkriegsführung seit langem tut. Anekdotische Evidenz wird vorgetragen, um diese Ideen zu untermauern.

Schlüsselwörter: Wirtschaftskrieg, hybrider Krieg, Dominanzerwartung, Allokation

## Guerre économique et théorie de dominances attendues

Ulrich Blum

La crise financière mondiale après 2007 a donné lieu à un vocabulaire économique martial. La guerre économique est devenue un mot à la mode dans le journalisme et la politique, alors que la rivalité économique stratégique entre la Chine et les États-Unis a atteint son apogée.

Je distingue entre concurrence et guerre économique comme deux faces de la rivalité économique. Dérivés de des sciences militaires, je donne une définition claire et nous nous référons également à d'autres types de guerre appelés hybrides. Je les justifie strictement sur le plan micro-économique. Dans un monde dynamique, la motivation pour entrer dans une guerre économique peut dépendre de la construction d'attentes pour la position économique et géo-économique future d'autres pays - ou entreprises. Je propose une théorie globale de la domination, qui inclut également les idées qui sont entrées dans le discours stratégique en tant que piège de Thucydide ou en tant que rivalité continent-maritime. Enfin, je souligne que la guerre économique peut être considérée comme un point de départ fondamental pour la guerre hybride, comme le fait la guerre militaire depuis longtemps. Des preuves anecdotiques sont présentées pour appuyer ces idées.

Mots-clés : guerre économique, guerre hybride, attente de domination, allocation

## 经济战争与主导地位期望理论

卜玉洗

自2007年的世界金融危机以来，经济词汇变得富有好战性。随着中美间战略性经济对抗白热化，“经济战”一词也在新闻报道和政治讨论中流行起来。

我将经济对抗划分为两种不同形式：竞争和经济战。在军事理论的基础上，我清晰地定义了经济战，并将它与属于混合战的其他类型战争联系起来。接着，我用严谨的微观经济学方法释义经济战。在一个动态的世界，是否发动经济战或许取决于对其他国家或企业未来经济和地缘经济地位发展变化的预期。为此，我提出了一个全面的主导地位期望理论，其中也包含了一些来自譬如修昔底德陷阱或海陆国家对抗等战略论述中的观点。最后我指出，如同存在许久的军事战，经济战或可作为混合战的基本切入点。后文所附的轶事证据将进一步论证这些观点。

关键词：经济战，混合战，主导地位期望，分配

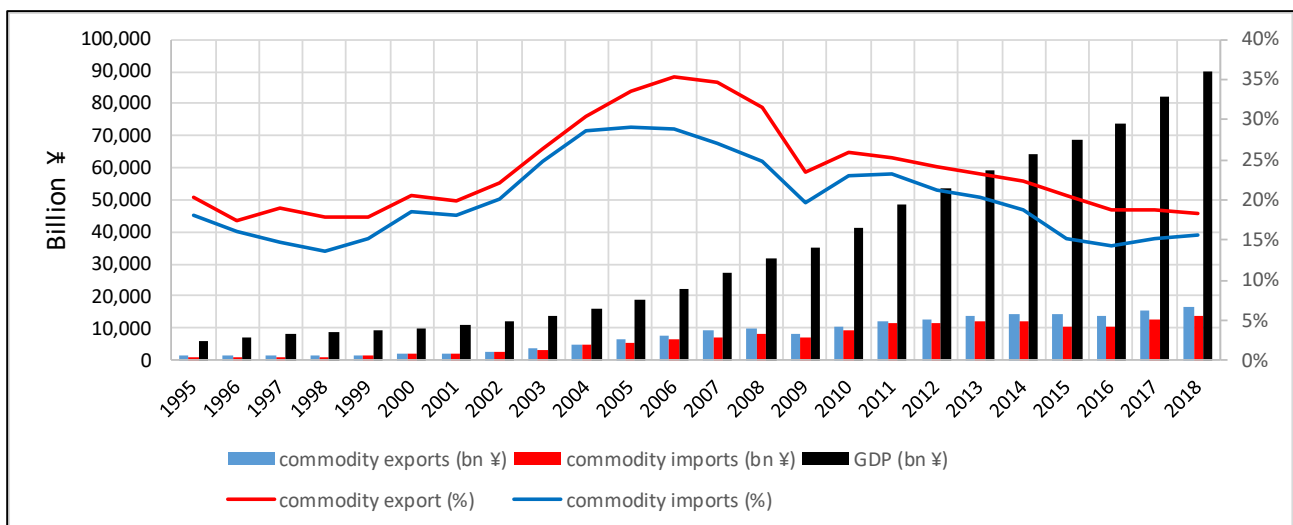
## 1. Economic War – an Economic Perspective

Donald TRUMP raises fundamental doubts about the long-term global position of the US, wants to “Make America Great Again” and bring industrial value creation back into the country – in short: He wants to enforce control over globalization! He sees himself confronted with an emerging power, namely China, which, in the sense of the development theory coined by Friedrich LIST (1841), uses all competitive and non-competitive instruments to accelerate its own growth under the name of *Fuxing* – revival.

Although free trade is the best of all global economic systems, as German Reichsbank President SCHACHT (1937) wrote in the aftermath of the global economic crisis of 1929 and hereafter in view of the partitioning of the world by colonialism, tariffs and devaluation races, it stands in sharp contrast to geostrategic thinking, especially to thinking in spheres of influence. The present global debate shows just how distant the European Community today is from such considerations and how close they are especially to nations such as USA, China or Russia with the respective philosophical and/or historic traditions. KAGAN (2003: 3) has coined this by arguing that Europeans are from Venus and Americans from Mars.

Likewise, Europeans have become very skeptical about the merits of free trade, which contrasts to their economic dependence on free markets in contrast to the US with its giant integrated market. China is among the main promoters of globalization, from which it profits because of its China-style strategic trade policy. In fact, deindustrialization in many western countries has fundamentally destroyed the positive perception of free and open markets. A more thorough look on China is worthwhile taking: It realizes globalization in absolute terms but deglobalization in relative terms. Over the years, the share of exports in total value added has declined as have domestic inputs in total output has increased. Figure 1 shows the development of imports, exports and GDP: Import and export shares have reached maxima in the mid of the last decade.

**Figure 1: Imports, Exports and GDP, China 1995 to 2018**



Source: CHINA STATISTICAL OFFICE, <http://data.stats.gov.cn/>

We may regard the ongoing trade war as a political-economy answer to the (national) loss of strategy and control vis-à-vis to globalization. Globalization puts pressure on democratic sovereign rights (RODRIK 1997), thereby evoking the risk of social disintegration in the developed world. RODRIK (2011) sets doubt into the fundamental compatibility of globalization, nation-state and democracy. Obviously, China sacrifices democracy, the United States or even England with the BREXIT globalization and Europe the nation state – however, the latter was the ultimate savior in the financial crisis. If RODRIK is more concerned with the political-economic problem in the form of loss of control, FLEMING (1962) and MUNDELL (1963) in the MUNDELL-FLEMING trilemma already showed that free movement of capital (globalization), monetary autonomy (nation state) and control exchange rates (fiscal democracy) cannot be married. The trilemma can also be justified in terms of transaction-cost theory because the respective institutional arrangements with their information, management and control structures are largely mutually excluding (BLUM, DUDLEY, LEIBBRAND, WEISKE 2005).

Rivalry expresses the tension between the pursuit of individual human excellence on the one hand, and social organization and ethics on the other; it stands between philosophy and politics or economics. Sources of conflict are elementary forces of fear, honor and interests, as THUKYDIDES had recognized more than 2000 years ago. Rivalry has an anthropological constant that manifests itself in both biological and social evolution. The term itself comes from the Latin word *rivalitas* and refers to the shared use of a watercourse. Rivalry has mental or physical dimensions; in any case, violence is at the center of action with the aim of imposing one's will on one's opponent, i.e. coercion. The Charter of the United Nations provides in Article 2, Number 4, a definition of violence that reaches beyond the military, and also includes economic violence.

In his book *The soldier: an obituary*, SCHNEIDER (2014: 94) describes war as "*mutually mass killing with a clear conscience*". The masses create a demarcation to crime, the good conscience to gang warfare. Implicitly, this assumes an ideologization, the idea of a just cause for which a mission is to be promoted and followed. Finally, good conscience implies that, when transferred to business, the passing of pertinent governance codes, if not laws, is accepted with approval, and states have legitimacy and even legality, at least grant impunity. Economic warriors often count on recognition, honor and triumph in the case of success.<sup>1</sup>

There are a number of definitions of economic warfare: In the age of mercantilism, people spoke of "*guerre d'argent*", a war of money as a typical means of dominating other countries. WILLISEN (1990: 5) sees economic war primarily as an activity of the state and distinguishes it from the peace order. A close relationship to the military war is seen with the aim of destruction or long-term damage to the national economy of the rival country. BRODNITZ (1919: 1) classifies economic war as part of the

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<sup>1</sup> The book by Kevin ROSS (2015) *Young Money: Inside the Hidden World of Wall Street's Post-Crash Re-recruits* gives an impression of this as well as the book by Maureen SHERRY (2016) *Opening Belle*, in which she describes her experiences in the macho world at Bear Stearns. The film by Martin SCORSESE (2013) *Wolf of Wall Street* and the documentary *Inside Job* by Charles FERGUSON (2010) complete these pictures. They are reminiscent of the orgies and debauchery of the leading classes, as described by the great Jewish-Hellenistic philosopher PHILON OF ALEXANDRIA (circa 10 BC - 40 AD) in his book *De Vita Contemplativa* the field of orderly competition is abandoned and victory celebrations become orgies. This will be taken up later when the personality of economic warriors is analyzed.

measures for the downing of an opponent and sees it also in connection with the military. Starting with the above-mentioned definition of war by SCHNEIDER, the economic analogy to the mass sacrifice of human beings must be specified. CREVELD (2008) adds that wars are characterized by ceremonies, cult objects, specific motivations, an extraordinary understanding of community as well as an oscillation between the joys and sorrows of the struggle, group-dynamic events analogous to historical triumphal marches are likely to succeed economic wars – and they are indeed what many accounts of the banking sector are telling.

NEITZEL (2010: 49-50) uses a broad definition of economic war. *“These are conflicts that are essentially fought with economic means that are aimed at the economy or whose output is dominated by economic factors. Economic wars can thus be part of a 'hot war', but also be held in peacetime – think of trade blockades, embargos or customs wars, especially in the early modern period. The decisive factor is that economic aspects determine a war or – in peacetime – the nature of bilateral relations.”*

There are four essential characteristics that shape the economic content of the conflict, namely, (i), the causes of war, (ii), the aims of war, (iii) the conduct of warfare proper and, (iv), the consequences of war. In this paper, I define economic war as follows (BLUM 2020):

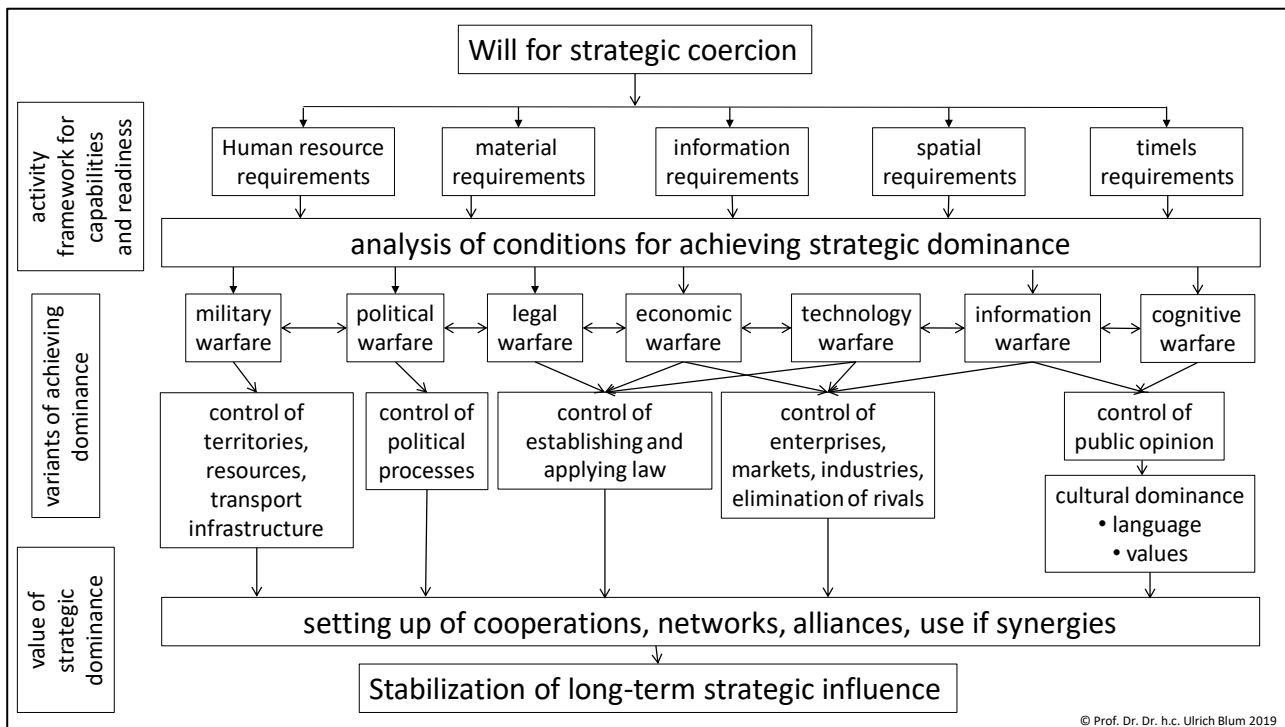
*“Economic war is the deliberate, aggressive use of appropriate means to destroy or devalue human capital, physical capital, intellectual capital, and organizational or social capital of an economic rival by individuals, corporations, and / or states without moral reservations or under their justification or back-up in a demarcated market to maintain or achieve economic dominance.”*

The intentional aggression seems to be characteristic because the rival is visibly and can directly be addressed, unlike in the ideal case of polypolistic competition in which he remains anonymous. TRUMP substantiates the enemy: the European countries and China, and thus follows the agonal philosophy of SCHMITT (1932: 27), who radically distinguishes solely between friends and enemies: *“The concept of the enemy includes the contingency of an armed struggle in the realm of the real, that means here a war. ... The war follows from the enmity, because this is its own negation of another being.”* Only imperfect competition makes the counterpart identifiable – so that an escalation to an economic war is possible. The necessary means are aimed at destruction. In contrast to creative destruction (SCHUMPETER 1912, 1942), there are no (future) gains that can evolve or can be extracted from the loser – at least in the short or medium run – as they are described in terms of bankruptcy deals, i.e. a triage of remaining human and physical capital that can be reemployed and gives stability to a subsequent path of recovery

In this article, I argue that the concept of economic warfare, based on a rigorous formal definition, has rich potentials to properly describe the present global rivalry between nations and enterprises, especially if the relationships to international law, WTO-regulations and national antitrust law are considered that are meant to guarantee open markets. I further argue that the microeconomic basis provides an important perspective to explain individual motivations to start an economic war. I further

propose to see economic in the broader, hybrid context of different types of dominance that are given in Figure 2, but where economic rivalry plays an increasing role.

**Figure 2: Hybrid Elements of Domination**



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Source: own design, HDV 100/200, DIDIER (2003)

From a historical point of view, BRENNER (1983) places rivalry in the context of gambling and raises the question of why risk is taken. Alternatively, what happens if all individuals were risk averse and nobody would bet on ideas (BRENNER 1987)? Is trying the new and conquering the unknown an important part of the human condition, man's drive to play the game of life, as Johan HUIZINGA (1933, 1950) proposes. What then are roots for war, especially economic war from an anthropological, a social science or a psychological perspective? Rivalry can manifest itself in many fields, including the military, the political, the legal, the economic, the technological, the information and the cognitive spheres. They interact and are used for mutual support, as GERASSIMOW (2013) has shown when instrumentalizing hybrid warfare in terms of the political purpose, as established in the political philosophy of CLAUSEWITZ (1832: 39-40). This focus on the economy also corresponds to the concept of the market society, which POLANYI (1944) introduced in the description of the Great Transformation. Has the economization of all spheres of life, as described in the *Communist Manifesto* of MARX and ENGELS (1848), shifted the theater of conflict towards the economy, and military war to economic war?

The remainder of the article is organized as follows: In the second section, I inquire into the many perspectives on economic warfare, firstly, from an anthropological, a social-science and a psychological and, secondly, from a political-economics perspective. The aim is to identify, what makes an economic warrior, and the conditions that trigger the outbreak of conflicts. The third section provides a strict definition based on the static or comparative static concept of the production possibilities

frontier and innovation theory. This is extended, in the fourth section, by including dynamic aspects of intertemporal allocation. Examples in these two sections are used in support of the arguments. The fifth chapter concludes the analysis.

## 2. Economic War and its Drivers in Literature

Following classical economic ideas, free trade should create peace. As an enlightened philosopher, Immanuel KANT (1795) postulated in his tractate *Perpetual Peace* that the republic is the natural organization of societies to guarantee peace. This liberal position was economically reflected earlier by MONTESQUIEU (1748) in his concept of *doux commerce*. How do economics and politics interact? And what makes humans to become economic warriors? Could bankers from the 2008 financial crisis be the modern twins of CORTEZ or PIZARRO?

### 2.1 The Socio-Biological and Psychological Background

The anthropological, socio-biological and psychological aspects of economic war are little discussed as is economic warfare itself seldomly defined in stringent and rigorous terms. As known from political economy, economic warfare addresses important areas of tension: To what extent is man a cooperative and how strongly is a rival being. Associated with this, a second question arises: How strong is he biologically, how strongly socially determined? As a consequence: what duties does he have to perform for society? Should he, as an entrepreneur, only maximize the profits of his business or promote public goods – possibly even using illegitimate or illegal methods? Here, the image of man is reflected against the state philosophies, which address the assessment of the moral quality of human action. Does man live in a Hobbesian jungle (HOBBS 1651), an agonal world of class struggle (MARX, ENGELS 1848) or in race struggle (GUMPLOWICZ 1875, 1878), a world that interprets sociality as weakness (RAND 1943, 1957), a world of identity struggle (HOUELLEBECQ 1995, 2014), or under cooperative, ordering systems (SMITH 1759; KANT 1785; BUCHANAN 1975; RAWLS 1971). Perhaps agonal action is expedient from the point of view of the evolutionary process. It can be shown that many elements of socially deviant behavior are helpful under specific situations (NESSE 2019). For economic warriors, especially lack of empathy generates fundamental competitive advantages (DUTTON 2012).

Anthropological and sociobiological approaches emphasize the fundamental aggressiveness of humans in terms of social rivalry, which is a topic of human ethology. From this perspective, man possesses an innate aggressiveness that was necessary for survival in prehistoric times (LORENZ 1963; EIBL-EIBESFELDT 1984, 1988). He possesses a biologically deeply rooted mistrust of the unfamiliar and the strange. War is an intra-species aggression (EIBL-EIBESFELDT 1994: 190-192), "*by means of which an individual or a group can position or enforce their interests against the resistance of others.*" Can this aggression drive not be lived out, an explosion may occur. Often, violence is exported geographically through military interventions in third countries, which relieves the home front, or, in fact, through economic war. The notion of group enters the arena because of kin selection (HAMILTON

1964), as co-operation intensity is assumed to be a function of genetic proximity to successfully propagate the gene pool of the group. EIBL-EIBESFELDT (1994: 200-203) points out that the drive of rank-seeking in human beings, which, unlike other drives, is not self-limiting, is of central importance. Without the use of weapons, man does not count on fatal ends of conflict because of his innate killing inhibition. Since war also aims at annihilation, the killing of the enemy must be stylized to a heroic deed. The biological filter of killing inhibition, that is, not killing one's own species, is superimposed by a cultural factor to destroy the enemy declared. Thus, it is always the enemy from which the aggression emanates, which in turn is reflected in a multitude of cultic actions in the run-up to, during, and after the war (CREVELD 2008). This can be observed analogously in economic wars, as mentioned earlier (see footnote 1). In intergroup aggression, the difference between attack and defense also fades away.

Dominance experiences may play an important role in the social genesis of children. Negative experiences seem to increase risk aversion, but unfavorable living conditions reduce them. The former is evolving from the desire to pursue goals (STOIBER, SCHÄFER 2013) and search for prestige, especially among children from less well-off families who want to be taken serious. Such bullies supplement an initially aggressive mobbing strategy with overarching benevolent cooperation offers in order to generate a sustainable social environment. The concomitant pressure to conform stabilizes networks and creates identity, which allows heterogeneity of individuals, division of labor and internal differentiation (JOHNSON ET AL. 2009). Many executives were socially conspicuous and deviant at a young age and were characterized by frequent rule violations (OBSCHONKA ET AL. 2013; GRISKEVICIUS ET AL. 2013). Unfavorable living conditions reduce risk appetite (KNÜPFER, RANTAPUSKA, SARVIMÄKI 2014; GUIISO, SAPIENZA, ZINGALES 2014). This applies, for instance, to the so-called depression babies from the time of the Great Depression (MALMENDIER, NAGEL 2011). Genetic risk dispositions play a role here because methylation, that is the reading out of the DNA, is altered (BARNEA, CRONQVIST, SIEGEL 2010; CZAJA 2008). These effects can also be visible in subsequent generations (SKINNER 2015). Finally, the home can play an important role because wealth promotes children's ego and thus fosters narcissistic behavior (MARTIN, CÔTÉ, WOODRUFF 2016). Even the effects of business cycles on later behavior can be shown (SCHOAR, ZUO 2011). Social cynicism may evolve from these personalities if, as business leaders, they lack any empathy and have no access to accountability for their personal environment (AQUEVEQUE, ENCINA 2010).

Psychological and sociological approaches emphasize envy as an important explanatory quantity of social disposition, because it makes the dialectics of identity and competition visible (SCHOECK 1966): Nothing is as influential as the envy of adolescents, especially between siblings, and governs their development of own self-esteem, thus significantly contributing to the balancing of societies between rivalry and cooperation. Envy is an appearance of invidious proximity, for instance between neighbors, which relates to the concept of rivalry. It is not about absolute differences, but about their subjective perception – the envious searches for confirmation of his envy. Empirical results suggest that this envy is not related to the level of income but to (perceived) differences (ENTORF, SPENGLER



2002, ALBRECHT, ENTORF, 2003; FELTES 2005). Thus, the social mastering of envy becomes a cultural challenge that many high religions have achieved. Modern institutional economics and governance describes the cooperative roofs under which islands of rivalry can be organized as socially efficient and wealth enhancing; it is the driver of success of modern Western societies. Generosity, on the other hand, does not prevent and may even escalate envy: the more one wants to reduce envy through gifts, the more own superiority is shown – which in turn triggers new envy. Envious people are quite willing to harm themselves if they can do harm to the envied – envy has a great potential for self-destruction.

This leads to the modern political philosophers, but also to the theory of institutions and in particular to game theory, which represents the solution of the respective social dilemmas in the provision of common goods. Other references to biological approaches exist: For instance, the low-empathy construct points to a possible malfunctioning in the amygdala gland as well as the connection of intestinal flora and behavior (DUTTON 2012; ZITTLAU 2019).

Constant deviant behavior theory (QUINNEY 1964, 1965) postulates that there is an anthropological predisposition to deviant behavior on the individual supply side, and that social convention on the demand side decides what constitutes criminal or belligerent behavior. Is the expression of aggressiveness or the experience of self-efficacy (CORIANDO 2003) an anthropological disposition that shifts into the philosophical and psychological? Business warriors enjoy basking in their omnipotence, and from a certain moment in time, they feel like superstars, in fact, exploiting their companies rather than delivering their own services, as they claim (VERHEYEN 2018). They stage their effects medially and see themselves as superstars (MALMENDIER, TATE 2009).<sup>2</sup>

Economic warriors certainly see the moral aspect in their tasks. The concept of moral self-licensing assumes that individuals build up an inner moral account or count in moral balances and thus have a kind of inner discharge system for misconduct. This literally evokes deviant behavior and is legitimized in self-reflection (MERRITT, EFFRON, MONIN 2010).

The theory of risk homeostasis (WILDE 1982, 1994) gives an impressive explanation for such economic warrior behavior: individuals want to maintain their level of risk; if certain areas are made safer, or if the costs are borne or hidden by third parties, then the individual or the group is willing to accept increased risks. If individuals need a certain level of risk for their well-being that is somehow blocked, then they put it into other areas – the risk spills over, for example from individual traffic to recreational sports. This may explain, why Steven PINKER (2011) legitimately speaks of a world more peaceful compared to earlier times. Military conflicts may have shifted into new areas – for example, towards economic conflicts.

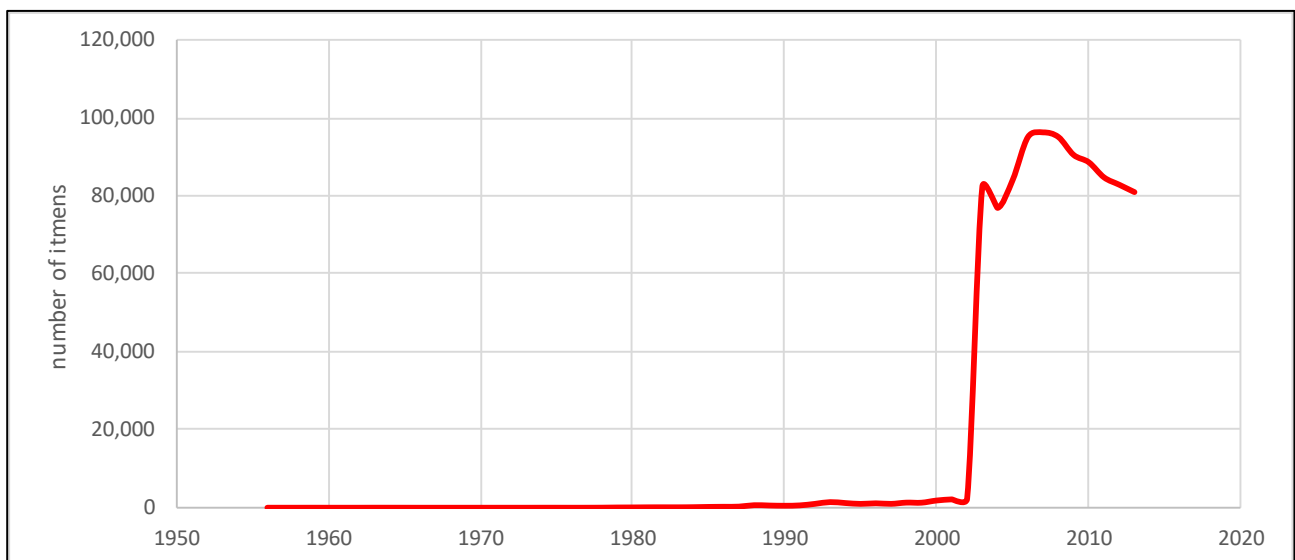
The importance of social imprinting is emphasized in particular by evolutionary institutionalism (PATZELT 2011, 2015). Here reference is made in particular to the role of the social genes, the memes

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<sup>2</sup> A bizarre example of a rogue corporate leader is Jean-Marie MESSIER, head of Vivendi, who described himself in his autobiography as J6M (Jean-Marie MESSIER Moi-Même-Maître-du-Monde; MESSIER 2000).

(DAWKINS 1976, BLACKMORE 1999). They are coded information that are passed on in myths, symbolism, and metaphors; the latter is addressed by cognitive linguistics (LAKOFF, JOHNSON 1980; FAUCONNIER, TURNER 2002). Societies are multi-layered systems, in which there must be a balance between the individual layers. In cases of differences, a system of mutation and replication in search of efficient new structures emerges that leads to the wash-out of inefficient systems. On a micro level, this refers to family structures and educational systems or group structures. On the large scale, it addresses entire states, for example the mismatch of the central planned economies in a global market economy environment, in which the former failed, or the arguments forwarded by (RODRIK 1997, 2011). The relevance of war-metaphoric communication can be seen clearly in the increasingly combative language of the modern business press (BLUM 2020) and was recently documented by LÜ (2015) for China, as shown in Figure 3 where the jump occurred after WTO ascendency of China in 2002.

**Figure 3: The Use of *JING ZHENG* in Scientific Articles, 1956 bis 2012**



Source: LÜ (2015); data from TONGFANG (no date.)

## 2.2 The Economic and Economic Politics Background

The effects of military conflicts on trade for the time since 1870 are negative sums games – but not dissuasive (GLICK, TAYLOR 2010). Under conditions of rational expectations, potential rivals should therefore reduce their external relations. Democracies and equal interests fuel trade (MORROW, SIVERSON, TABARES 1998), but alliances to a lesser extent. An ex-ante rationality is not recognizable. This tendency of a synchronization of conflict and economics is visible (SCHNEIDER, TROEGER 2006). Finally, conflicts among economically particularly intertwined partners should be rare because they are extremely expensive – the corresponding signals of a conflict would then be very credible (GARTZKE, LI, BOEHMER 2001).

Why then do disputes take place between close trading partners or companies with strong commercial links? WILLISEN (1919: 13) shows that any exchange may provoke hostility, because it illustrates the dependence on others, especially once there is an asymmetry in the power relations, which favors one-side. He anticipates what was later called the dichotomy in trade expectation theory (COPELAND 1996), i.e. that trading countries should not actually wage war, but are intensely involved in doing so, as two positions are in conflict (COPELAND 2015):

The liberal position as formulated MONTESQUIEU (1748) and confirmed by HIRSCHMAN (1982) proposes that trade brings valuable benefits why trade-dependent and particularly vulnerable states should not seek conflict. Simply said: trade is more profitable than war. The argument based on COBDEN (1853) that trade unifies the countries was later reinforced by ANGELL (1909) that war was simply too costly. When the Great War broke out in 1914, its costly destructions were seen as a confirmation. In the age of nuclear stalemate, as ROSECRANCE (1986) argues, states have the choice to be either commercial or territorial. The former would gain their wealth through international exchange, the latter through territorial expansion. DUGIN (2014) expresses this position particularly strongly for Russia as a new Rome vs. the USA as the old. This will be taken up later when discussing dominance expectations.

This brings us to the realistic position, which argues that exactly the opposite is the case: the economic exchange increases the risk of war because states with strong security interests reject the risk of dependency, especially in strategic commodities. Dependence, as WALTZ (1979) postulates, or even extortion (MEARSHEIMER 1990) leads to an urge to expand political and territorial control. These considerations go back historically to the seminal work of LIST (1841), who formulated the idea of strategic economic policy for the development of a country – also in view of its rivals – which were reformulated by KRUGMAN (1990) in his New Trade Theory and by TIROLE (1988) in modern industrial organization theory. The expectation of future tectonic power shifts, i.e. the expectations of dominance, must therefore be included in the calculus of rivalry. The relevant question is: “*Will the current national competitive position be overcome by a competitor in the near future?*” Then economic rivalries can escalate into economic wars and finally even to real wars, as shown by the rivalry between Germany and England at the turn of the 19th century (COPELAND 2015). Trade led to increased dependencies and then did not pacify rivals as a result of negative expectations of dominance. KISSINGER (2011) warns that the west should not replicate these errors against China. A thorough look at the initial conditions offers too many similarities of the conflict pattern not to wipe away the argument.<sup>3</sup>

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<sup>3</sup> Similarities between the Anglo-German and the Sino-American rivalry include, for instance the easy maritime lock-off potentials of the respective nations and extend to the Baghdad-Railroad and Silk-Road Initiatives (access to the Indian Ocean); see BLUM (2019). It is fascinating to see similarities when referencing the Sino-American trade war to the First Opium War of 1838 between Britain and China: is started with a trade deficit and among the products involved were drugs. The letter of the Shanghai Governor about British inhumanity when pressing opium – in Britain illegal – into Chinese markets to balance trade is comparable to the letter of Trump to Xi stopping exports of opioids that kill thousands of Americans – both remained unanswered (BLUM 2020).

Dependency expectations are a vastly superior explanation than the already mentioned dichotomy between maritime and territorial powers or the rivalry between the old power against the new power (ALLISON 2017) postulated. This will be taken up later.

### 3. Foundation of Economic Warfare

#### 3.1 *Microeconomic Context*

Economic wars affect stability at the state level or, in general, the certainties of life. That is contrary to competition, which enables rivals to grow together. In sports this jointness of effort is evident because otherwise a comparison was not possible. Competitors are meant to learn from each other. In war, this is not conducive. NAPOLEON is said to have stated during the Russian campaign (1812): "*You should not fight with an enemy too frequently, because otherwise you teach him the totality of your art of war.*" This is exactly why he failed in 1813. NIETZSCHE (1893: 3) made it even clearer: "*A great victory is a great danger. Human nature endures it more severely than defeat.*" In fact, victory often carries the roots of future defeat. Therefore, strategic total destruction must be attained to prevent learning and experience effects to undermine one's own position, especially if the number of competitors is limited and if a dominant position is the prerequisite for future expansion.

The perspective presented below focuses on the results of rivalry, less on the classification of means and instruments whether they are competition-like or war-like. In the military war, this distinction does not seem necessary: whether weapons speak or remain silent is easy to discern; but in hybrid wars this demarcation is already difficult and in economic warfare, it is nearly impossible unless you see the results. More precise: In an unclassified world, it is rather opaque when hybrid war – and this includes economic war – starts. And before responding to hybrid, economic instruments including – balanced – attack by an unbalanced, potentially military response, it has to be assessed whether acceptable limits to rivalry have been transgressed. Economist should try to define and then identify the threshold.

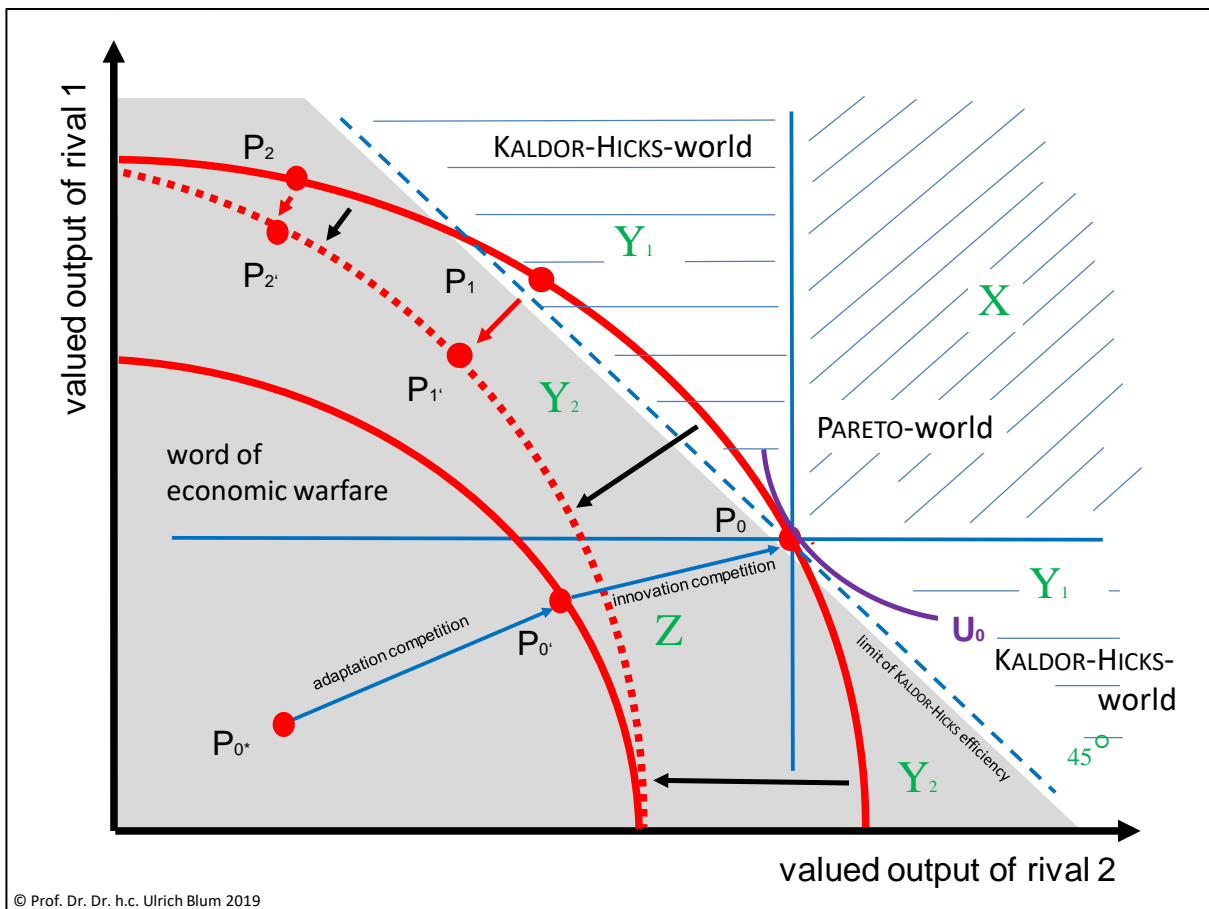
Figure 4 illustrates the rivalry between two parties competing for resources or markets. Starting from a point  $P_{0*}$  below the lower production possibilities curve, the competitive pressure forces a steadily improving use of resources - up to point  $P_0$  on the production possibilities curve. This adaptation competition now uses the existing state-of-the-art resources according to best practice and reduces the A-inefficiency (LEIBENSTEIN 1966). Beyond that, we distinguish among four fields:

- (1) Through innovation competition, the production possibility of both companies (or states) is shifted outward as a result of the technical progress, and point  $P_0$  is reached, which is tangential to the utility function  $U_0$ . All the innovations that enhance the value of at least one rival lie in the northeastern quadrant X of the PARETO world – the ideal world of competition. Firms may be destroyed, but in this world of creative destruction, new combinations emerge, i.e. triage is

not only positive but both rivals grow through competition, as Joseph SCHUMPETER (1912, 1942) argued.

- (2) Above a  $45^\circ$  axis, but outside of this X-field, we find those results where the innovation achievement of the superior rival always exceeds the loss of the lower one; in the two triangles  $Y_1$  rival 1 is superior to rival 2 and rival 2 is superior to rival 1. Because the winner could theoretically compensate the loser, this line is called the KALDOR-HICKS line. In an intertemporal sense, the  $Y_1$ -fields could be intermediate stations: There is a creative destruction according to SCHUMPETER (1912, 1942), but the returns of the superior are reinvested and also parts of the old capital of the vanquished, so that in the long run the field X is achieved. Otherwise, the winner of the economic war will at least generate a total macroeconomic advantage.
- (3) In the two triangles  $Y_2$  below the KALDOR-HICKS line, the successful rival cannot compensate the loser one as the losses are too high. Only the winner gets a benefit, which is thus individual but no longer collective.
- (4) In the rectangular field Z, even both fail because, for example, an innovation has led to an environmentally destructive struggle for resources that may even cause the production-potential curve to go down (dashed curve). One could speak of a PYRRHUS world.<sup>4</sup>

**Figure 4: Microeconomic Distinction between Competition and Economic Warfare**



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Source: own representation, BLUM (2020)

<sup>4</sup> In the war against Rome (279 BC), King PYRRHUS of Epirus said after the battle of Asculum, "Another victory and we are lost." He won, but the price was too high.

We may note that SCHELLING (1984: 369) addressed fields (3) and (4) when he argued that war or deterrence is not worthwhile: "*The fact that war hurts – that not all losses are recoverable – makes war itself a dramatically nonzero-sum activity [...].*" The two triangles  $Y_2$  and the southwest quadrant  $Z$ , all shaded gray and located below the KALDOR-HICKS line, represent the world of economic warfare.

Deviations from  $P_0$  may emerge from massive price or quantity shifts, thereby penalizing one of the adversaries. This could be done by raising rival prices through manipulations in the vertical value chain (SALOP, SCHEFFMAN 1983) or by forcing them into other technologies, for instance using patents like mines.<sup>5</sup> Certain production points would still be optimal for one party, but not necessarily for all:  $P_1$  could still be a transient SCHUMPETER point in terms of creative destruction which could later generate a new PARETO world, and the loss of rival 2 is below the gains of rival 1. However, at  $P_2$  compensation is no longer possible. If the production frontier shifts inwards as a result of the economic war, as the dashed clockwise swinging curve illustrates, the path from  $P_1$  and  $P_2$  to  $P_1'$  and  $P_2'$  also means a loss for both.

### 3.2 System's War East-West

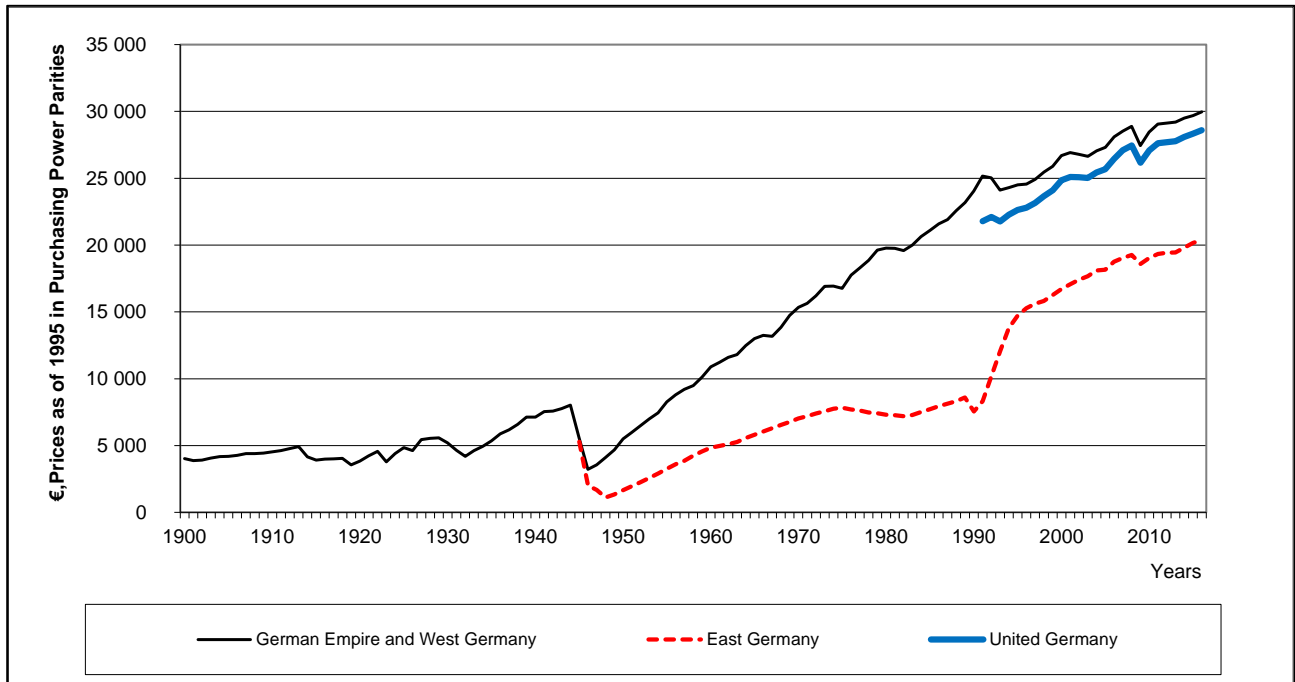
A grand example of economic warfare is the system's war between East and West until the Fall of the Wall, best exemplified by the antagonism between East and West Germany, which was especially seen as an economic war by the East German government (SCHALCK-GOLODKOWSKI, VOLPERT 1970). Many means that were used such as boycotts and trade barriers (Cocom-List), espionage (*Concorde – Concordski/Tupolew* 144), on the direct level, denial to resource access, extraterritorial application of law (Cuba), currency interventions, terrorism and state terrorism (support of Bader Meinhof-Gang) etc. on the indirect level. After HONECKER's dismissal and a rigorous analysis of the state of economic affairs by the East German Government in September 1989, as documented by the so-called SCHÜRER Report (SCHÜRER 1989, SCHÜRER ET AL. 1989), it became clear that the central planning system, and even the East German state, could not survive. This crash of the socialist system led FUKUYAMA (1992) to think of an end of history in the Hegelian-dialectic sense. Before, an analysis of the currency regimes pointed to a productivity – compared to West Germany – of some 20% to 25% (SCHALCK-GOLODKOWSKI et al. 1988).

Figure 5 highlights this situation. It shows the income development in the German Empire from 1900 up until today's United Germany. One can see the perturbations and shocks from the First World War, the world economic crisis of the late twenties and early thirties, and the Second World War. Then the development splits. West Germany is able to compensate for these disasters and, in the mid-sixties, returns to its old growth path. East Germany not only suffers from adverse starting conditions due to Stalinist reforms; the "HONECKER years", characterized by massive expropriations of medium-

<sup>5</sup> Militarily speaking, mines are used to block, delay or channel enemy troops. These strategies can clearly be seen in the Sino-American trade war. Blocking means denying access to technologies, thus forcing rivals into other technologies; delaying implies slowing-down market access; channeling means forcing them onto a certain technological path that makes them vulnerable against own hits. For a detailed description on economic weapons, see BLUM (2020)

sized enterprises and the destruction of the remainder of the middle class, led to stagnation and a loss of competitiveness in this self-declared “*sixth largest industrial economy of the world*”. The rapid convergence after the unification was just able to offset these losses and put Eastern Germany back onto the former East German growth track. We can easily identify the shock from the world financial crisis in the graphs. It is also evident that the per-capita income during East Germany’s best time never exceeds the output performance of Central Germany in the late 1930s when it was the powerhouse of the German Empire and around 20 percent richer than the German average.<sup>6</sup>

**Figure 5: Development of Per-Capita Income in Germany, 1900 - 2016**



Source: BLUM (2019)

### 3.3 Car Wars

After the Second World War, there were about 100 independent automakers in the US. As a result of the decline in demand caused by the expiry of war production and the adjustment recession, the sellers' market turned into a buyer's market and companies came under heavy pressure. Under this fiercer competition situation, *GM* and *Ford* finally tried to push each other out of the market by means of price wars. In addition to the associated successive destruction or purchase of other companies and market adjustments, state aid was subsequently used because of the emerging structural problems in the industry.

This was a special form of prisoner's dilemma, namely an oligopoly game in which massive price reductions were to be used to conquer markets, with no one finally winning. As a result, a large number of companies went broke and others consolidated. Many came under the roof of *American Motors Corporation* (AMC), which was later swallowed by *Chrysler*. At that time even better-known

<sup>6</sup> GDP was not calculated in Germany prior to 1948. But tax receipts and capital endowment, i.e. number of cars, telephone access etc. suggest that the Central Economic Region (“Mitteldeutschland”) was about 30% richer than the rest of the Empire; see STATISTICAL YEARBOOK OF BAVARIA (1936).

manufacturers disappeared from the market like *Crosley*, *Hudson*, *Kaiser-Fraiser*, *Nash Packard*, *Studebaker*, *Tucker* and *Willy's* (Jeep). In fact, beyond the market adjustment and, thus, an unstable oligopoly, the war aims of *Ford* and *GM* could not be achieved. *Chrysler* was saved from bankruptcy by US guarantees at the end of the 1990s, then entered into a partnership with *Daimler-Benz*, which eventually failed and earned the nickname *Crimeler*, and presently cooperates with *FIAT*. In 2000, as a result of rebate battles and a false model policy, Ford entered a deep crisis that lasted around ten years. *GM* had to be nationalized in 2007 to save the company. None of the big two, *GM* and *Ford*, was destroyed or left the market. However, this price war weakened the entire US car industry, whose customers were now open to foreign bidders over the quality competition triggered by price reductions, helped by the long-overvalued US dollar as a result of post-Vietnam stabilization by the US.

## 4. Dominance Expectation Theory

### 4.1 A Microeconomic Foundation

If economic war often does not pay off in macroeconomic terms, why is it being run? The arguments for economic war presented in the previous sections always included the element of time. Even in a static formal setting, the arguments always addressed the future in a comparative-static way. In fact, the most important economic argument for conducting an economic war is – in the sense of intertemporal optimization – that all alternatives are worse. This is the content of Dominance Expectation Theory (DET).

Let  $\gamma_t$  be the (gross) rate of growth as a consequence of innovations in the economy. In a rival environment, these could be new products that strike out against other firms, or organizational changes. Examples in a world of competition could be a new cellphone or a new digitally improved plant organization, in case of economic war fake news about competing products that destroy their basis or economic sanctions. The triage factor  $\tau_t$  reflects the proportion of successfully recycled capital. The proportionate annihilation of old combinations that are inefficient and therefore can no longer be commercialized is  $(1 - \tau_t)$ .  $\gamma_t$  and  $\tau_t$  are random variables. Risky events that could negatively affect growth such as future environmental damage and rivalry costs, as measured by a random variable  $\eta_t \in [0,1]$  that describes the sustainability of growth. For the total expected growth of each period then:

$$(4.3.1) \quad E(\eta_t, \gamma_t, \tau_t) = \eta_t \cdot \gamma_t - (1 - \tau_t) \geq 0.$$

The expression cannot become negative because it can never be destroyed more than has been created through innovation. John KOMLOS (2014) in his article *Has Creative Destruction become more Destructive* forms a SCHUMPETER-Creative-Destruction Index (SCD index), which is calculated as follows:

$$(1.3.2) \quad SCD_t = \frac{(\eta_t \cdot \gamma_t - (1 - \tau_t))}{\gamma_t}.$$



The index reaches a maximum of unity (i.e. the PARETO-world), if there are no losses in growth and no triage losses occur; the value zero is reached, if the entire growth is eaten up by corresponding losses or by missing triage possibilities (PYRRHUS-world).

The efficiency analysis in Figure 4 is only comparative-static as it compares the starting and ending times. In fact, however, the duration is interesting, because innovation under competitive conditions is interlinked to the fact that once a successful, i.e. fast triage takes place, then, the triage factor would be high. Thus, the resilience of the system and the associated latency period, especially for the loser, gain a high importance. The ability to recover from a crisis is thus related to the time required to do so; this is given here by  $T$ , where  $T$  can also assume the value of infinity. Then a recovery never occurs. Furthermore, let  $Y_t$ ,  $t = 0, 1, 2, \dots, T$  be the theoretical growth process of an innovation or aggression; let capital interest be  $i$ . For an allocation above the KALDOR-HICKS line, the following must hold:

$$(1.3.3) \quad \sum_{t=0}^T \frac{E(\eta_t \cdot \gamma_t \cdot \tau_t) \cdot Y_t}{(1+i)^t} = \sum_{t=0}^T \frac{(\eta_t \cdot \gamma_t - (1-\tau_t)) \cdot Y_t}{(1+i)^t} \geq \sum_{t=1}^T \frac{Y_t}{(1+i)^t}.$$

If this inequality is not fulfilled, economic war prevails in any case, because the discounted total of all revenues lies below the value that was attainable on the old growth path.

This definition adds to that of CLEMENS (2013), which focuses on the ability to reduce the rival's income through targeted action. The own prosperity level is positively linked with that of the allies and negatively with that of the opponents. Since nothing is said about the duration of the lowering of the enemy's income, any successful competitive strike can be seen as an economic war. In fact, it is the longevity and irreversibility of destruction which characterize economic warfare.

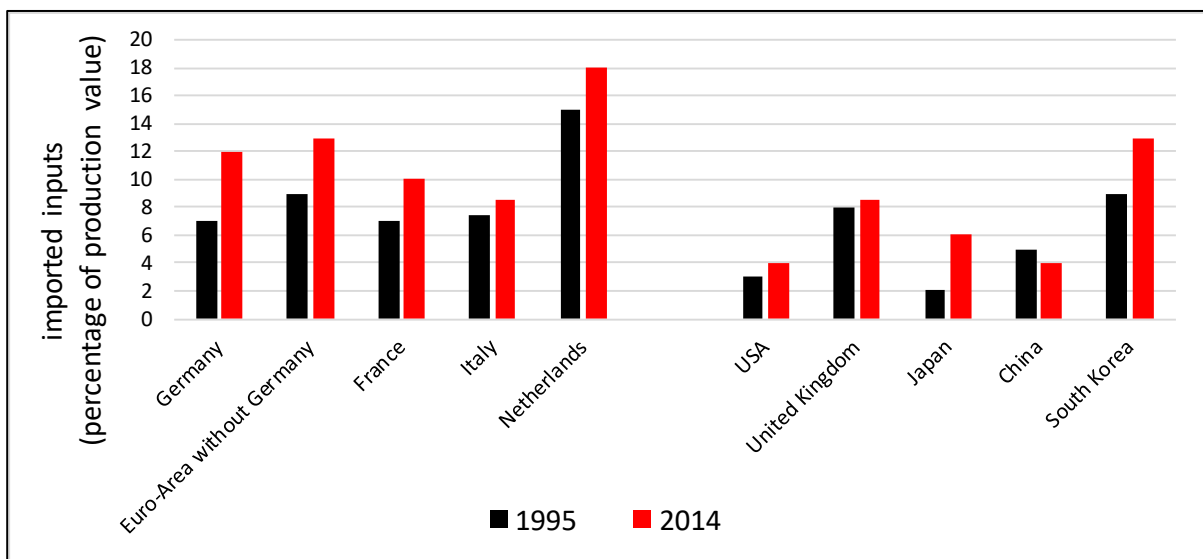
## 4.2 US-China Trade War

Unlike Germany's global market entry in the 1960s or Japan's in the 1970s and 1980s, the US today is much more vulnerable to external economic shocks due to its economic structure and the expiration of a long-cycle favored by the industrial sector; in particular, it has lost the ability to industrial leadership in many sectors, that is, determining the length of the product life cycle. In addition, US-history matters: The trade war takes place against the backdrop of a long protectionist tradition that the US has escaped for quite a long time, lowering its average tariff level to about fourth of that of China and about half of that of the EU. The secessionist war between 1861 and 1865 was based on the conflict between free trade (confederation, inter alia because of the export of cotton) and tariff barriers (northern states, inter alia to protect the developing industry).

Both countries are strongly antagonistic in their final political purposes in the Kantian sense: The US wants to ensure their economic and geostrategic superiority and prosperity guaranteed ("*America First*") and sees its hegemonic position threatened. They also want to show that they are ready to use economic pressure to achieve other goals that are difficult to achieve in the political process. As they have become independent in the oil business through fracking, sanctions have become a much more attractive weapon than before. China is looking for a 500-year absence from the world stage as a

future superpower, avoiding but not excluding conflicts ("*Fuxing*"), according to a position appropriate to its history and size. The means used by both sides cover the entire bundle of direct and indirect instruments already mentioned, in particular tariffs and retaliatory tariffs, blockage of technology transfer, illegal extraction of technologies, blockade of investments and corporate takeovers, devaluation of the currency, strategic support to important industries, subsidies, tax relief or loan programs, administrative harassment and, finally, extra-territorial law enforcement. One of the most important collateral consequences is the destruction of the multilateral world trade order. The starting question, namely the persistently increased US trade deficit, is now far less important than the long-term technological perspective. In fact, the proclaimed deficit corrects itself considerably as soon as the other balance-of-payments positions are taken into account; pairwise analysis of the relations between two countries makes little economic sense anyway. Far more relevant is the importance of the struggle for value chains (BLUM 2018), because China, as the following Figure 6 shows, is increasingly closing its chains and brings value chains back to their own country. In fact, China globalizes only in absolute terms and de-globalizes in relative terms also see Figure 1). It and has reduced its external positions by more than a third over the past ten years.

**Figure 6: Change of Value Chains, 1995 and 2014**



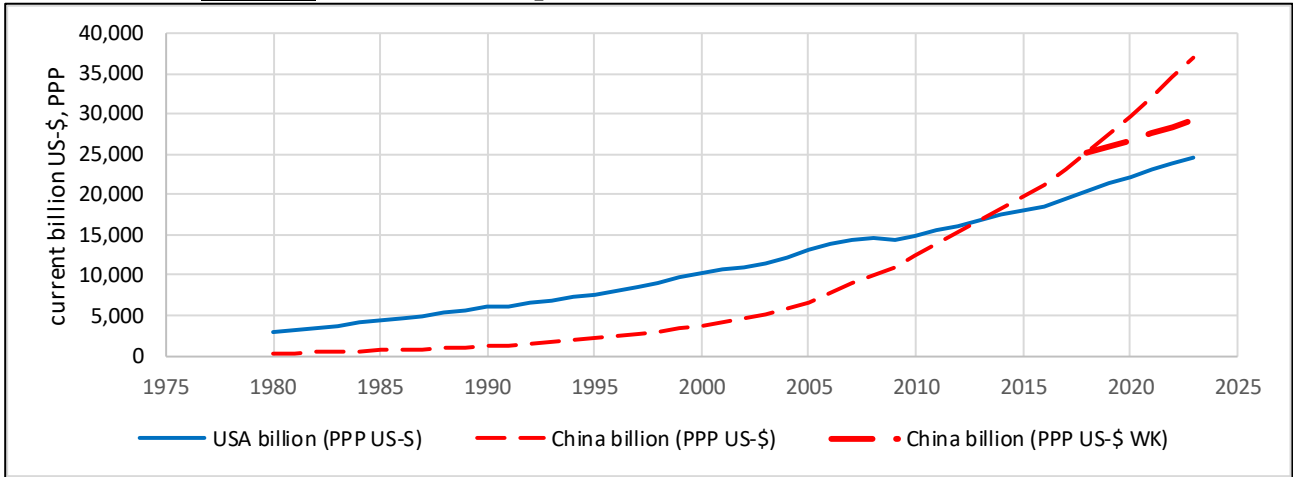
Source: DEUTSCHE BUNDESBANK

The strife for dominance is often linked in literature to the concept of the THUKYDIDES trap (ALLISON 2017), that is the antagonism between an emerging and an established power, or the maritime – continental agony based on significantly different values (DUGIN 2014). In fact, history shows that conflicts of maritime powers often started with economic wars, of continental powers with military war.

The following Figure 7 picks up these relationships: The upper, bold and solid line indicates the performance of American economic output measured or forecasted in PPP, the dashed lines of China. In 2014, China surpassed the US in total output. Taking into account per-capita economic performance, the US is currently more than three times as prosperous. But with Chinese economy growth rates of around six percent, overtaking is only a matter of time here. If the USA manages to halve the

rate of growth by means of an economic war, then China's chances of becoming the world's largest economic power are severely limited, as the stagnant population does not provide additional impetus. This is shown by the bold broken line following the year 2019.

**Figure 7: Dominance Expectations China vs. US, 1980 - and 2023**



Source: own design, data from INTERNATIONAL MONETARY FUND (2018)

## 5. Conclusions

In this article, I have provided an economically rigorous definition of economic war. I have explained motivations for entering conflict by discussing anthropological, philosophical, socio-economic and psychological arguments. Specifically, I have formulated an intertemporal-allocation reasoning by establishing the so-called Expected Dominance Theory (DET). Empirical examples were provided to support the arguments.

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