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"Beyond the Void? implications of Hegemonic Competition and the Lack of American Military Leadership on the Military Spending of European Democracies, 1920-1938"

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ABSTRACT:

This article explores the phenomenon of military spending in ten Western democracies during the interwar period, especially focusing on the lack of American military leadership and its impact on the external security needs of the European democracies. The hegemonic perspective advocated by many suggests that the economic leader of a system has to dedicate growing resources on security, eventually harmful to economic growth. The military spending patterns analyzed here suggest that, similar to totalitarian nations, UK and France challenged the limited American leadership in the 1920s and 1930s. However, the military spending levels were in general too low to have had an effect on their respective economic performances. This result is also verified here by employing Granger non-causality tests between the military spending and economic growth variables for these nations. Smaller democracies relied mainly on the UK and France for support in their military spending choices. Further research will have to embrace the inclusion of domestic political markets and their institutional complexities in the analysis.

"We have become a great nation, forced by the fact of its greatness into relations with the other nations of the earth, and we must behave as beseems a people with such responsibilities. We wish peace, but we wish the peace of justice, the peace of righteousness. We wish it because we think it is right and not because we are afraid. No weak nation that acts manfully and justly should ever have cause to fear us, and no strong power should ever be able to single us out as a subject for insolent aggression."

Theodore Roosevelt, 1905[i]

INTRODUCTION

This article attempts to explore some aspects in the military spending of ten Western democracies (France, UK, USA, Belgium, Denmark, Finland, Netherlands, Norway, Sweden, Switzerland) during the interwar period. The possibility of hegemonic competition among the democratic Great Powers, including the corresponding impacts on the smaller states, and the analysis of the implications of this "model" will form the focus of this article. Despite the seemingly hegemonic situation of the United States today, it did not always assume such a position whilst enjoying economic leadership in the international system of the first half of the 20th century. Indeed, what does the concept of hegemonic competition, in regards to military commitments, mean? How have the impacts of a hegemonic system and the military spending of the said nations been studied previously?

The historical study of military spending and decision-making has slowly become more interdisciplinary. For example, the study of military history has been changing ever since the Second World War, with emphasis placed on a new set of problems, primarily concerning ties between war and society. This loosely formed *New Military History* has been strongly influenced by various kinds of interdisciplinary efforts to explain the origins and causes of conflicts.[ii] Nonetheless, many of these studies on war and

societies have taken the form of explaining developments at an elusive macro-level. For example, *Paul Kennedy*'s "The Rise and Fall of the Great Powers. Economic Change and Military Conflict from 1500 to 2000", as criticized by many, is rather lacking in regards to the quantitative basis to support his notion of interaction between military spending and economic growth.[iii]

In the study of *defense economics*, the focus of research has been put on economic issues and methodology, with a tendency to avoid such broad topics as state formation and disarmament in the normative sense (an area of interest, among others, covered by the broader school of thought known as *piece science*). Many of the studies, especially undertaken by peace researchers, have been greatly interdisciplinary by nature.[iv] What piece science and defense economics have in common is their attempt to build models, among other things, to explain military spending, both within countries and among groups of countries. In defense economics and peace science the focus in the research, however, has almost exclusively been on the Cold War period.

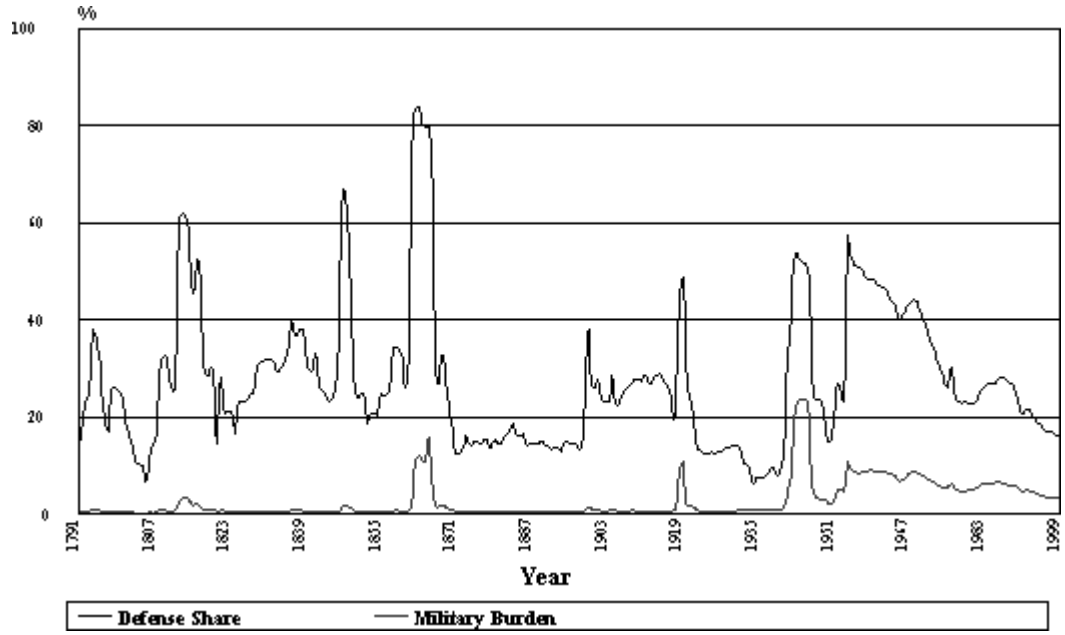
An important contribution in this field, closely related to the state formation debate[v] and the study of international relations in general, is the argument that the "quest" for hegemony and, correspondingly, military security are intricately linked to economic growth. *Robert Keohane, Joseph S. Nye*, Paul Kennedy, *Charles Kindleberger*, and *Robert Gilpin* are among the researchers who are most often connected with this systemic approach. According to Keohane and Nye, a state is likely to provide hegemonial leadership in the international regime if there are benefits to be gained from such action, with the hegemonial power being able to change the rules of the game rather than having to adapt to changes imposed by others.[vi] The hegemon, as the leader is referred to as, may use coercion (=stick) or positive incentives (=carrot) to achieve the goals that it seeks. This hegemon's economic/political leadership can erode due to crises or shifts in the overall balance of power between the states in the international regime. At such time, the so-called secondary powers, the "followers", respectively react by altering their goals in order to challenge the leader's position.[vii] Needless to say, this very abstract theoretical framework has attracted criticism[viii], especially from historians. All in all, most historical studies utilizing these suggestive ideas have focused specifically on monetary markets and trade regimes (especially competing trade blocs).[ix] As far as historical instances of hegemonic leadership are concerned, there seems to be unanimous agreement that the post-1945 period has been one of American hegemony, and with considerable agreement on the 19th century being that of British hegemony.[x]

One of the less explored aspects in most of these studies is the military component in the competition between the states for *military* and economic leadership in the system. According to especially Paul Kennedy, the leader nation(s) in a system has to dedicate increasing resources to armaments in order to maintain its position, while the other states, the so-called followers, can benefit from greater investments in other areas of economic activity. Thus, the follower states act as free-riders in the system stabilized by the hegemon. A built-in assumption in this hypothesis is that military spending eventually becomes harmful for economic development; a notion that has often been challenged.[xi] The development pattern implied, albeit cautiously, by Kennedy would have certain implications for both economic development and military spending. At the beginning of a "cycle" for a hegemon, the economy as a whole grows much faster than military expenditures (=ME). During this time span, the hegemon also initiates ever higher ME in order to secure its economic position. However, in the middle of the cycle, economic growth has already begun to decline, due to the military exertions, whereas ME is still growing. At this point, the hegemon attempts to compensate for its economic losses by wielding even more political/military muscle. At the end of the cycle, the burden of military expenditures has also declined sharply, enabling a new period of growth.[xii] The reaction of the follower nations would, respectively, correspond to this pattern, at a time lag. The challenge of the leader's economic/military position would begin when the hegemon has overreached itself. The assertion arising from this framework is that economic development and military spending are closely interdependent, with high military spending being the driving force behind economic cycles.

If we look at the real GDP (in 1990 Geary-Khamis dollars) of the other seven nations selected here, their combined share of the GDP of the United States in 1920 was circa 75 per cent; in 1938 this share was circa 82 per cent. Hence, the United States was the unambiguous economic leader of the interwar period; a position which had emerged in the late 19th century and became solidified by the First World War.[xiii] However, the American economic leadership did not easily lend to political leadership, as hegemonic

theorists often presume. According to Charles Kindleberger, a significant feature of the 1920s was the absence of a particular military leader nation in the world. Consequently, after the disintegration of the world economy started in the early 1930s, economic cooperation turned into economic rivalry and military competition for leadership.[xiv] The 1919 American withdrawal, in addition to Russian isolationism, put the international system "more out of joint with the fundamental economic realities than perhaps at any time in the five centuries", thus suggesting a period of adjustment.[xv] Furthermore, as Robert Keohane and Joseph S. Nye have pointed out, in such a period of adjustment the secondary nations compete for leadership and economic nationalism increases. This would implicate that the followers embark on higher military spending, naturally depending on their economic resources and market position.[xvi]

Figure 1. US Defense Share (=%, ME of Federal Government Outlays) and Military Burden (=%, ME of GNP), 1789/91—1999



Sources: ME and federal government outlays from *Historical Statistics of the United States, Colonial Times to 1970*. US Bureau of Census. Washington, D. C. 1975 up until 1970, then from *Statistical Abstract of the United States 1999* [online]. Available in www-format: <URL: http://www.census.gov/prod/www/statistical-abstract-us.html until 1999 (1999 figure is estimate); GNP from Mitchell, Brian R., *International Historical Statistics: The Americas 1750—1993*. Fourth Edition. New York 1998 until 1993, then from *Statistical Abstract 1999* until 1998, and 1999 figure is a GDP figure (estimate) from *USA Statistics in Brief* [online]. [quoted 1.7.2000]. Available in www-format: <URL: http://www.census.gov/statab/www.part4.html.

As we can observe from Figure 1, wars — domestic and international — have induced peaks in the American military spending relative of federal government outlays and GNP, from the 18th century until today. The American ME indicates quite clearly that the United States did not act like an international military hegemon, as represented by a high military burden, until the 1950s. Indeed, prior to the last decade of the 19th century the United States was quite isolationist, before American companies started their active expansion abroad. Between 1896 and 1941, the United States pursued an expansionist policy; however, directing its activities toward economic and strategic aims primarily in the Caribbean and the Pacific.[xvii]

Thus, the notion that the hegemonic paradigm does not fit the facts of the first half of the 20th century has merit. This period can hardly be explained away as merely a period of adjustment between two

hegemonial regimes. Instead of attempting to provide an answer to the difficult question why this occurred, the purpose here is to see what kind of consequences this situation imposed especially for the military spending of the other Western Great Powers, the United Kingdom and France, as well as some of the smaller European states. Also, I will attempt to investigate whether an interdependence existed between economic development and military spending for them.

The idea that a country's poor economic performance can be linked to the "wasted" economic resources represented by military spending is, as recent studies have shown, controversial: economic development is usually more significant in explaining military spending rather than vice versa.[xviii] In order for the *military burden* (= percentage of military expenditures of GDP or GNP) to hinder economic performance, it would have to surpass all other areas of an economy, such as is often the case in wartime. In this paper, the first hypothesis, namely that economic growth may be influenced by military expenditures (=the Kennedy proposition) or vice versa, is explored by utilizing Granger non-causality tests. Secondly, it is possible to test whether the two large "follower" states, UK and France, were merely adjusting their ME as a response to the lagged American military spending in this period. For example, if they made their budgeting decisions simultaneously to the Americans, they did not act as followers. Small nations can be considered the ultimate followers in this framework, lacking the ability to challenge others for leadership.

The countries selected here for the comparison, in addition to the United States, consist of the most prominent European democracies, all possessing democratic political institutions instead of clearly authoritarian rule. The analysis of a hegemonic system or its impacts on the smaller states would indeed benefit from the inclusion of totalitarian states. However, for example in the case of Germany, statistical sources dealing with the military spending and "acceptable" statistical data[xix] are often topics of some debate. Data problems also advocate the exclusion of, for example, the Eastern European Great Powers, such as Poland.[xx] Moreover, the interaction of the political system and the economy in a dictatorship pose some further theoretical challenges, which lie beyond the scope of this paper. Here I only briefly utilize the military spending data of Italy and Japan.[xxi]

What do the military expenditures here consist of? There have been various definitions for this concept [xxii]. The definition chosen here, following *Frederick Pryor* (1968), incorporates all expenditures for the recruiting, training, and maintenance of an army, navy, air forces, and national security troops in military expenditures, excluding such items as expenditures on civil defense, veterans, military research and development, interest payments on war debts, reparations, and military assistance abroad.[xxiii] Contrary to Pryor, military construction is here included. Furthermore, spending on national security troops, like the Finnish Civic Guards, are included in the spending figures.[xxiv] Colonial military spending, due to the sources used, is not included in the series except in the case of the United Kingdom, which formed only circa 2.6—3.7 per cent of her military expenditures in 1925—1927.[xxv]

In the next section, the military spending patterns of these nations are analyzed in comparison with the hegemonic development pattern outlined in this section. Subsequently, the more precise statistical testing of the two hypotheses presented here questions: 1) whether an interdependence of economic growth and military spending existed for these countries; and 2) whether the other nations were merely following the American leadership, or indeed responded to the lack of it. In conclusion, further research challenges are briefly contemplated upon, including, for example, the importance of domestic political markets.

A CONSPICUOUS VACUUM? Military Spending of France, United Kingdom, and the United States, 1920—1938

American isolationism has inspired a lot of debate over its extent and impact on the world affairs during the interwar period. For example, *Thomas Paterson* et al. advocate the use of the term "independent internationalism". American influence was strong in Europe and Latin America, although the American foreign policy was based on the principle that Europe would have to solve its own problems without American involvement.[xxvi] American isolationism, as inadequate as the term may be, left the European and even the "world" power politics largely in the hands of the United Kingdom and France. Germany and Russia had been defeated in the First World War, thus leaving room for these traditional Great Powers to re-emerge in European politics. However, the British, like the Americans, were less and less

interested in the goal that France valued the most: keeping Germany in check. Additionally, the United Kingdom was more pre-occupied by extra-European problems, namely keeping her vast Empire from disintegrating. At the beginning of the 1930s, France seemed to be the diplomatic leader on the European scene. The French economic performance of the 1930s, however, especially in comparison with the other European Great Powers, undermined this position quickly.[xxvii] Thus, the European stage created something of a ”power vacuum” during the 1930s, which seemed to invite contenders for military/political leadership.

The overall development of military expenditures turned out very differently among the countries selected here. In the United States, military expenditures, real and nominal, dropped significantly after the Great War, and the 1920s in general brought about more federal expenditure cuts. Military expenditures also remained quite low in the United States throughout the 1930s. The United Kingdom and France, however, put greater resources into their military security, both in terms of real ME and military burden.[xxviii] What kind of external security needs did they exhibit? Of these countries, the United States had by far the greatest resources to build up its military readiness. The United States was, nevertheless, a reluctant political leader in the interwar period, and the American economy also experienced the most severe depression of these ten countries. In *relative* terms, the United Kingdom, France, and for example Finland of the smaller nations, seemed considerably more eager than the rest to devote resources for military purposes. Of these, especially France assumed an active foreign policy role in Europe in the 1920s and 1930s. Respectively, for example, Belgium’s military expenditures were greatly affected by the austerity measures in the late 1920s, which also affected their slow growth in the 1930s. Norway’s development, using almost any indicator, was in this sense exceptionally stable. Of the smaller countries, Finland seemed to feel most threatened, due to, among other things, its long border with the communist Soviet Union.[xxix]

The depression of the early 1930s — or in the case of the United States, the whole decade — did not seem to have a profound effect on the military spending of most countries. Even the American military burden and military expenditures per head of population taken as annual averages actually seemed to rise to a higher level in the early 1930s. Only a slight dent can be observed in the spending curves of most of these nations. Reasons for this development can be found in the rise of international threats, the rise of domestic political restlessness and right-wing influence, and the rise in state involvement in the economic life as a whole. Conversely, the downturn of the American economy left room for other nations to emerge on the scene in the international struggle for leadership. This is also reflected on the aggregate military spending of these nations. Among the new challengers were, of course, the dictatorships, such as Germany and Japan. Of the ten democracies, the United Kingdom and France also seemed to respond to the challenge, especially in the late 1930s.[xxx]

The hegemonic paradigm, especially in the form advocated by Paul Kennedy, implies competition for economic and political resources among the leader(s) and follower nations. This struggle for power means increased armaments spending and international power conflicts.[xxxi] In light of the lack of American military leadership, we may also ask whether the British and/or French military burdens abided by the leader-follower pattern, relative of the American military burden. The British position was that of a challenger, out to achieve economic yet very limited (dedicated to the British Commonwealth) political leadership once again. British military spending, which was particularly high right after the end of the First World War, increased strongly again in the late 1920s and throughout the 1930s. The military burden, however, stayed at a high level throughout the time period and did not start to increase noticeably until the late 1930s.[xxxii] The most conspicuous feature in the British economic performance was that the economy did not suffer, in comparative terms, as pronounced a setback during the Great Depression as the United States. Yet, as far as the competition for hegemony is concerned, the increases in the early 1930s British military spending can hardly be explained just in terms of a challenge towards world leadership on her part.

How did the French case differ from the British? France, unlike the United Kingdom, pursued diplomatic and political leadership in Europe, especially in the 1920s. This corresponds to the French pattern of military spending from the end of the 1920s onwards. Whereas her economic performance was modest in the 1930s, the French real ME increased, most likely due to the German challenge, almost during the entire decade. The same can be said for the military burden, which was quite high throughout the interwar period. In the French case, it might be possible to suggest, in the terms of the hegemonic competition

"model", that the economy could not withstand the military burden. Yet, such claims will have to be verified in one way or another for them to be credible, for example by utilizing statistical analysis.

ECONOMIC GROWTH AND MILITARY SPENDING: Examining the Hegemonic Paradigm

The hegemonic framework advocated by Paul Kennedy presumes a causal influence of military expenditures on economic development. In the interwar period, the growth in military spending "should" have had a negligible impact on the overall economy. For example, the American interwar military burden was, except for 1920—1922, between 0.6 and 1.3 per cent, whereas during the 1950s the American military burden was often over ten per cent.[xxxiii] Thus, the conclusion might be that the meager burden imposed by the military spending of the interwar years could not have been very significant for the development of these economies. The conclusion could be the exact opposite: military spending was, in fact, yet another form of the hegemonic pattern, dependent on the development of the economy and economic rivalry in general. Firstly, we can explore the "causal" links between the economy and the ME by applying the concept of Granger non-causality in the analysis of the military spending and economic growth variables.

Table 1. Granger Non-Causality Relationships between Nominal ME and Nominal GNP/GDP, and Military Burden and Real GDP per Capita in USA, UK, and France, 1920-1938

DEPENDENT VARIABLE	INDEPENDENT VARIABLE	NUMBER OF LAGS (FOR BEST *p*)	BEST *p*-VALUE
1. USA:			
ME nom.	GNP nom.	2	0.074
GDP nom.	ME nom.	1	0.133
MILBUR	GDP per cap.	2	0.703
GDP per cap.	MILBUR	4	0.335
2. UK:			
ME nom.	GNP nom.	2	0.002
GDP nom.	ME nom.	1†	0.038
MILBUR	GDP per cap.	2†	0.005
GDP per cap.	MILBUR	5	0.095
3. FRA:			
ME nom.	GDP nom.	3†	0.041
GDP nom.	ME nom.	4	0.165
MILBUR	GDP per cap.	3†	0.029
GDP per cap.	MILBUR	1	0.798

Sources: see Eloranta 2000 and Eloranta 2001. All variables are in logarithmic form. Note: UK MILBUR is *I*(2). † = null rejected at more than one lag. Real GDP per capita from Maddison 1995.

Granger non-causality refers to a statistical antecedence, in which the possible "causality"[xxxiv] between X and Y is verified by testing the validity of the lagged values of X and Y in predicting their respective development. Thus, the possible outcomes include: Y Granger causes X, X Granger causes Y, both Granger cause one another, or there is statistical independence between the variables. Here these relationships were tested for both nominal ME and nominal GDP (GNP for UK and USA), as well as for military burden and real GDP per capita in these ten countries. Due to potential problems of autocorrelation and nonstationarity, the logarithmic forms of these variables were preferred. The assumption of stationarity, based on unit root tests, holds for most of the variables in this period.[xxxv] Equally, if the tests on both pairs of variables suggested the same direction of "causality", they were considered more reliable. Table 1 contains the results of the tests on the Granger non-causality relationships for the Western Great Powers, tested for optimum lag length from the maximum of five years to one year, with longer lag structure and rejection of the null at more than one lag indicating higher reliability for the results.

Table 1 indicates that although the US nominal ME seemed to be Granger caused by nominal GDP, this causation can not be supported by the respective Granger non-causality tests on the

military burden and GDP per capita. Thus, US military spending and GNP may be considered independent of one another during this period. In the UK case, both the nominal ME and the military burden were Granger caused by economic development in this time frame. Moreover, similar tests on the reverse relationship rejected the null hypothesis of non-causality on both counts (although in the case of MILBUR as independent variable only barely). Thus, economic growth in the UK case was, respectively, dependent on military spending and vice versa. Analysis of the French case provides different results compared to the British case: military spending can be considered to be Granger caused by economic growth (although in the case of MILBUR this is doubtful due to only lag of one), yet the reverse relationship was not evident. Therefore, the first assumption arising from the hegemonic paradigm — i.e., one-way dependence of economic growth on military spending levels — did not hold for these countries.

One may also analyze the leader-follower pattern by regressing the nominal ME and military burdens of the UK and France on the American military spending variables. Here the British and French military burdens or nominal ME (log) were regressed, separately, as dependent variables, with the US military burden or nominal ME first on the level, then with a lag of one year, and finally with a lag of two years on the independent variable. As in the case of assessing the Granger non-causality relationships, the results were considered more robust if the regressions were significant for both variables, nominal ME (indicating a more direct link) and military burden (indicating a more structural relationship), and both pointing towards the same results. In the UK case, the regressions on nominal ME and the military burden suggested a weak relationship either on the level or with a lag of one year on the US military burden. These contradictory results thus suggested relative independence between the UK and US military spending decision-making. The French case was more unambiguous; there seems to be enough evidence to suggest relative independence compared to the US military spending pattern. Overall, both the United Kingdom and France seem to have followed their own path relative to the US military spending. These results cast considerable doubt in the validity of the leader-follower pattern in the interwar period, at least in such a simplistic form.[xxxvi]

If we do regression analysis on the responsiveness of the military spending of the United States and France to one of the nations considered to be a threat (here: Japan and Italy[xxxvii]), we find that they responded to the threat posed by a potentially hostile country differently. In the US case, military spending seemed to respond positively (33—55 per cent response to a 100 per cent increase by the Japanese) to the Japanese threat with a lag of one or two years, as indicated by the nominal ME and military burden variables respectively. The French military spending also displayed a negative statistical dependence to the Italian military spending patterns. Thus, both France and Italy maintained high military burdens especially in the 1930s, yet their military spending decisions were timed differently. Nevertheless, a connection existed.[xxxviii]

What about the small countries selected for comparison here? First it must be noted, as mentioned earlier, that the threats experienced by these countries varied greatly. The position of smaller nations was of course quite different from that of the Great Powers. Small states can be understood equally well as ”players” in the international power games and political blocks and/or possible targets for trade domination and even land acquisitions for the Great Powers.[xxxix] For the small countries selected here, the overall economic development of the period was quite stable and the impact of the Great Depression was not very long lasting. Their military spending increased slightly during the course of the 1930s. However, their respective military burdens, on the average, remained quite even throughout the decade. The obvious conclusion is that they did not begin active rearmament until the last few years of the 1930s. Respectively, there were Granger-causality links between the military spending and economic development variables for most of these countries. Especially in the case of Finland (see Table 2), there seemed to be strong interaction between both the nominal (ME, GDP) and structural (MILBUR, GDP per cap.) variables. In the Norwegian case, the military spending variables were Granger caused by economic growth. In the other cases, however, overall it seems that the evidence is overwhelmingly in favor of the interpretation that military spending was Granger caused by economic development, yet not vice versa.

Table 2. Granger Non-Causality Relationships between Nominal ME and Nominal GDP, and Military Burden and GDP per Capita in Belgium, Denmark, Finland, the Netherlands, Norway, Sweden, and Switzerland, 1920—1938

DEPENDENT VARIABLE	INDEPENDENT VARIABLE	NUMBER OF LAGS (FOR BEST *p*)	BEST *p*-VALUE
1. BEL:			
ME nom.	GDP nom.	4†	0.016
GDP nom.	ME nom.	1	0.297
MILBUR	GDP per cap.	3	0.265
GDP per cap.	MILBUR	5	0.293
2. DEN:			
ME nom.	GDP nom.	1	0.122
GDP nom.	ME nom.	1	0.406
MILBUR	GDP per cap.	5†	0.015
GDP per cap.	MILBUR	1	0.040
3. FIN:			
ME nom.	GDP nom.	1†	0.056
GDP nom.	ME nom.	4†	0.006
MILBUR	GDP per cap.	1†	0.004
GDP per cap.	MILBUR	2†	0.001
4. NED:			
ME nom.	NNP nom.	3†	0.067
NNP nom.	ME nom.	5	0.078
MILBUR	GDP per cap.	1	0.174
GDP per cap.	MILBUR	1	0.130
5. NOR:			
ME nom.	GDP nom.	1†	0.006
GDP nom.	ME nom.	3	0.181
MILBUR	GDP per cap.	1†	0.028
GDP per cap.	MILBUR	1	0.182
6. SWE:			
ME nom.	GDP nom.	2†	0.017
GDP nom.	ME nom.	1	0.057
MILBUR	GDP per cap.	1	0.087
GDP per cap.	MILBUR	1	0.201
7. SWI:			
ME nom.	GDP nom.	4†	0.043
GDP nom.	ME nom.	1	0.039
MILBUR	GDP per cap.	2	0.456
GDP per cap.	MILBUR	1	0.028

Sources: Real GDP per capita in 1990 Geary-Khamis dollars from Maddison 1995. Belgian GDP came from Buyst, Erik, 'New GNP Estimates for the Belgian Economy during the Interwar Period'. *The Review of Income and Wealth. Journal of the International Association for Research in Income and Wealth*, No. 3, 1997 and ME from Clement, Piet, *De Belgische overheidsfinanciën en het onstaan van een sociale welvaartsstaat, 1830—1940*. Leuven 1995; Danish GDP and ME were found in Johansen, Hans Christian, *Dansk historisk statistik 1814—1980. Danmarks historie, bind 9*. Copenhagen 1985; Finnish GDP figures came from Hjerppe, Riitta, *Suomen talous 1860—1985. Kasvu ja rakennemuutos*. Kasvututkimuksia XIII. Helsinki 1988, ME from Tervasmäki, Vilho, *Eduskuntaryhmät ja maanpuolustus (valtiopäivillä 1917—1939)*. Helsinki 1964; Dutch NNP and ME were found in Central Bureau voor de Statistiek, *1899—1979: tachtig jaren statistiek in tijdreeksen*. Staatsuitgeverij 1979; Norwegian GDP came from *NOS XII . Historical Statistics 1968.* Central Bureau of Statistics of Norway. Oslo 1969, ME data from *Historisk Statistikk 1978*. Norges Officielle Statistikk XII 291. Oslo 1978; Swedish GDP data from Krantz, Olle, 'Swedish Historical National Accounts 1800—1990 — aggregated output series'. Umeå (1997) (manuscript), ME from *Statistisk Årsbok för Sverige* (1919-1941), corrected with Höök, Erik, *Den offentliga sektorns expansion. En studie av de offentliga civila utgifternas utveckling åren 1913—1958.* Stockholm 1962 (as explained in Eloranta 2000, Appendices); Swiss ME from Vogler, Albert, *Die schweizerischen Militärausgaben von 1850—1963 un ihre Auswirkungen auf die wirtschaftliche Entwicklung der Schweiz*. Lungern 1965 and GDP from Ritzmann-Blickenstorfer, Heiner & Thomas David, *New Estimates of the Swiss Gross Domestic Product (1892—1960)* (Forthcoming: 2001). All variables are in logarithmic form. Note: DEN GDP nom. is *I*(1). † = null rejected at more than one lag.

Did the military spending abstinence of the economic leader, the United States, have any implications for these countries? Without exception, these countries were dependent on maintaining good relations with the European Great Powers, the United Kingdom and France (in addition to Germany in the 1930s). The failure of the disarmament efforts of the 1920s crumpled the hopes of these countries for the continuation of peace. For example, the collective action failure of the League of Nations, the organization in which the small countries had high hopes, had a devastating effect on the security aspirations of the small European nations. The basic principle underlying the League of Nations was the preservation of peace, yet this goal was undermined right from the beginning by the absence of the United States, not to mention Germany (admitted in 1926), the Soviet Union (joined in 1934), and the withdrawal of several states in the latter part of the 1930s. The precise powers of the League in enforcing the collective security arrangements were also difficult to agree upon. The Locarno Treaty of 1925 and the Kellogg-Briand Pact of 1928 helped to create an illusion that the League was being strengthened. Nonetheless, even though the League had developed a number of techniques of conciliating conflicts by the end of the 1920s, the major crises of the 1930s proved these efforts meaningless in the European and Asian power politics.[xl]

The small European democracies relied on France and the United Kingdom for protection in their military spending decisions.[xli] For example, in the Belgian case the military alliance with France exerted a positive influence on Belgian military spending, with the lag of two years providing the most convincing results. However, in all the cases involving statistical sensitivity to the US military spending, the two different variables had coefficients with opposite signs, thus making the results less convincing. Whereas in most cases the influence of the two European Great Powers was positive on the military spending of the small countries, in the Norwegian and Swedish cases there was a distinct tendency to free-ride on the security efforts of these two Great Powers, especially France.

Nonetheless, the significance of these military spending patterns should not be overemphasized either. In large and small countries alike, different domestic market organizations, namely economic interest groups, played a crucial role in determining military spending levels and the allocation of military contracts. For example, in interwar Finland, a small country in the sample that seemed to maintain a high *relative* level of military spending similar to France and the UK, the organizational gains of these groups were made possible by the internal power struggles within the larger political entities as well as in the military establishment. The influence of the domestic interests in the Finnish decision-making led to an emphasis on domestic military production. This ”Finnish path” was further strengthened by the establishment of government-owned military production facilities supported by the Social Democrats, otherwise averse to military spending.[xlii]

In most countries military establishments also obtained funding from various sources, which were not always included in the aggregate spending figures. In the United States, for example, the Navy’s rearmament drive was, in addition to the official federal expenditures dedicated to national defense, funded from the *NIRA* (=National Industrial Recovery Act) funds in the mid-1930s. The Army received numerous indirect benefits, due to no doubt pressure activity as well, from the New Deal building and employment programs. Roosevelt’s election for a second term in 1936 enabled him to pursue his goals with greater confidence, and this applied especially to military matters.[xliii] The influence and importance of domestic political markets, budgetary patterns, and perceptions of threat can hardly be overlooked in the study of this time period. Thus, the results achieved have to be considered only tentative, yet they offer interesting insights on the interdependence of military spending and economic development.[xliv]

EPILOGUE

It is highly problematic to attempt analysis of military spending from the hegemonic competition perspective alone, even for such a dominant military hegemon as the United States in the beginning of the 21st century. Military expenditure analysis should try to combine both external and internal influences for the state(s) in question. This also corresponds well with the analysis of any public good. The strict definition of a public good[xlv], arising from the free-rider dilemma in its production, leads inexorably towards more complex explanatory frameworks. Military spending decision-making, often a controversial issue within the

political spectrum, is also subject to the same historical and institutional continuities and discontinuities as other fields of public policymaking.[xlvi]

The hegemonic framework, as represented by many researchers, is hard to define exactly. However, it can perhaps be reduced to two testable hypotheses: 1) Military spending and economic growth are interdependent. Moreover, military expenditures tend to be a causal factor in the development of the economy; 2) The follower countries follow the leader in their military spending decisions, implying a dependence on the lagged military spending levels of the leader. In the interwar period, the military burdens of the Western democracies increased in the 1930s, in the midst of an economic crisis. The rearmament efforts of these nations were, however, more modest than those of their totalitarian challengers. The evidence in this article suggests that among the Western Great Powers economic growth Granger caused military spending, instead of vice versa. It must also be noted that the interaction between military spending and economic performance was not as simple as implied by the hegemonic competition pattern for these countries. It seems that for example the United Kingdom and France made their military budget decisions either independent of the United States or with a maximum lag of one year, depicting the lack of follower behavior. The smaller countries, in the absence of American political/military presence in Europe, tended to emphasize good relations with the European Great Powers and the role of the League of Nations. This was also confirmed in this paper with regression analysis on their military spending, respective of the Western Great Powers. The UK and France were the main sources of a "security blanket" for these nations. They responded to the rearmament drive of the 1930s only reluctantly in the closing years of the decade.

The hegemonic paradigm undoubtedly has some important contributions to offer for the study of crises and world economic order. In other areas of inquiry, such as trade competition, this approach may have more to offer in the future. This study suggests further challenges for the study of military spending among Western democracies during the interwar period. We need more concrete ways of measuring the impact of hegemonic competition, especially by estimating the supply and demand side developments, as well as calculating the impact of military spending on economic growth, perhaps as a hindrance or a benefit to the economy.[xlvii] Moreover, the supply and demand factors should also include the impact of domestic power structures and allocation patterns, as well as competition within the political markets. After all, military expenditures greatly reflect the values of the societies in question.

NOTES:

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[i] The Inaugural Address of Theodore Roosevelt on Saturday, March 4, 1905 [online] (2001). The Avalon Project at the Yale Law School [quoted 16.6.2001]. Available in www-format: <URL:http:///www.yale.edu/lawweb/avalon/presiden/inaug/troos.htm>..

[ii] See Eloranta, Jari, *Different Needs, Different Solutions — The Importance of Economic Development and Domestic Power Structures in Explaining Military Spending in Eight Western Democracies During the Interwar Period*. A Licentiate Thesis in Economic History at the University of Jyväskylä 1998 for further discussion. In addition, see Paret, Peter, *Understanding War. Essays on Clausewitz and the history of military power*. Princeton, New Jersey 1992 for details.

[iii] See Kennedy, Paul, *The Rise and Fall of the Great Powers. Economic Change and Military Conflict from 1500 to 2000*. London 1989. Kennedy calls this type of approach, following David Landes, "large history"; see Kennedy, Paul, *Uuden vuosituhannen haasteet.* (Finnish translation) Keuruu 1994, 7, 26. On criticism of Kennedy's "theory", see especially Sandler, Todd & Keith Hartley, *The Economics of Defense.* Cambridge Surveys of Economic Literature. Cambridge 1995 and the studies listed in it, particularly Gold, David & Gordon Adams, 'Defence Spending and the American Economy'. *Defence Economics*, Vol. 1, 1990. Other examples of long-run explanations can be found in, e.g., Pearton, Maurice, *The Knowledgeable State. Diplomacy, War and Technology since 1830*. London

1982 and McNeill, William H., *The Pursuit of Power. Technology, Armed Forces, and Society since A.D. 1000*. Chicago 1982.

[iv] Singer, J. David, 'Introduction'. In *The Correlates of War: I. Research Origins and Rationale*. Ed. by J. David Singer. New York 1979, xi—xviii; Singer, J. David, 'Variables, Indicators, and Data. The Measurement Problem in Macropolitical Research'. In *Measuring the Correlates of War*. Ed. by J. David Singer and Paul F. Diehl. Ann Arbor 1990.

[v] See e.g. Tilly, Charles, *Coercion, Capital, and European States, A.D. 990—1990*. Cambridge 1990, 6-14.

[vi] Keohane, Robert O. & Joseph S. Nye, *Power and Interdependence. World Politics in Transition*. Boston 1977, 44—45.

[vii] Keohane-Nye 1977, 45—46; North, Robert C., *War, Peace, Survival. Global Politics and Conceptual Synthesis*. Boulder 1990, 147—149; Eichengreen, Barry, *Elusive stability. Essays in the history of international finance, 1919—1939.* New York 1990.

[viii] Rapkin, David P., 'The Contested Concept of Hegemonic Leadership'. In *World Leadership and Hegemony*. Ed. by David P. Rapkin. Boulder 1990, 3—5; North 1990, 142—144; Kindleberger, Charles, 'Hierarchy versus Inertial Cooperation'. In *The International Economic Order. Essays on Financial Crisis and International Public Goods*. (Originally published in *International Organization*, Vol. 40, No. 4, Autumn 1986) London 1988; Eichengreen 1990, 273—275.

[ix] Kindleberger, Charles, *The World in Depression 1929—1939.* London 1973; Eichengreen 1990.

[x] Rapkin 1990, 8—9. See also Kennedy 1989 — interpretations based on military might or trade dominance alone are more contested, such as the case of the Netherlands in the 17th century.

[xi] Kennedy 1989; Gilpin, Robert, *The Political Economy of International Relations.* Princeton, New Jersey 1987, xiii; Hodne, Fritz, 'New Perspectives in Economic History'. *Scandinavian Economic History Review*, Vol. XL, No. 1, 1992, 80—82. See also Maddison, Angus, *Dynamic Forces in Capitalist Development. A Long-run Comparative View.* New York 1991; Kennedy, Paul, *The Rise and Fall of British Naval Mastery*. Third Edition. London 1991; Hodne 1992, 82; Kindleberger 1973.

[xii] See a related article by this author Eloranta, Jari, 'Military Competition between Friends? Hegemonic Development and Military Spending among Eight Western Democracies, 1920—1938'. *Essays in Economic & Business History*, Vol. XIX, 2001.

[xiii] See Maddison, Angus, *Monitoring the World Economy 1820—1992*. OECD, Paris 1995.

[xiv] Kindleberger 1973.

[xv] Kennedy 1989, xxi.

[xvi] Keohane-Nye 1977*;* Gilpin, Robert, 'Economic Interdependence and National Security in Historical Perspective'. In *Economic Issues and National Security*. Ed. by Klaus Knorr and Frank N. Trager. Lawrence 1977, 47—54; Kindleberger, *1973*.

[xvii] North 1990, 117—118.

[xviii] On criticism of this mechanism, see i.e., Gold-Adams 1990.

[xix] See e.g. Abelshauser, Werner, 'Germany: guns, butter, and economic miracles'. In *The economics of World War II. Six great powers in international comparison*. Ed. by Mark Harrison. Cambridge 1998; Ritschl, Albrecht, 'Nazi Economic Imperialism and the Exploitation of the Small: Evidence from Germany's Secret Foreign Exchange Balances, 1938—1940'. In *The Third World Congress of Cliometrics, Munich Germany* 1997; Fremdling, Rainer, 'German National Accounts for the 19th and Early 20th Century'. *Scandinavian Economic History Review,* Vol. XLIII, No. 1, 1995. This problem becomes even more pronounced in the case of Eastern European countries, see van Ark, Bart, 'Towards European Historical National Accounts'. *Scandinavian Economic History Review*, Vol. XLIII, No. 1, 1995 for an overview.

[xx] There are some sources available for such data, e.g. Banks, Arthur S., *Cross-Polity, Time-Series Data.* Cambridge, Mass. 1971. However, the macroeconomic data behind the figures are outdated. For further discussion, see Eloranta, Jari, *The Demand for External Security by Domestic Choices: Military Spending as a Public among Eleven European Democracies*. June Paper 6/2000. European University Institute, Florence. Available from the author by request.

[xxi] On wages in the German totalitarian economy, see e.g. Temin, Peter, 'Socialism and wages in the Recovery from the Great Depression in the United States and Germany'. *The Journal of Economic history,* Vol. 1, No. 2, 1990. On the military spending series of totalitarian nations, see Eloranta, Jari, *THE DEMAND FOR EXTERNAL SECURITY BY DOMESTIC CHOICES: Military Spending as an Impure Public Good among Eleven European States, 1920—1938.* Dissertation. European University Institute, Florence 2002.

[xxii] Pryor, Frederick L., *Public Expenditures in Communist and Capitalist Nations.* London 1968. See also Herrera, Rémy, *Statistics on Military Expenditure in Developing Countries: Concepts, Methodological Problems and Sources.* Development Centre Documents. OECD, Paris 1994, 13—14. For other data concerns, see Eloranta 2002.

[xxiii] Pryor 1968, 85—86.

[xxiv] However, the funding for the Civic Guards in Finland, for example, came also from other sources than from the public authorities. Other civil defense expenditures, small in quantity, are excluded in other cases besides the UK. See Eloranta 1998 for details.

[xxv] Calculated from: *League of Nations, Armaments Year-Book. General and Statistical Information*. Publications of the League of Nations IX. Disarmament 1928. IX.1. Geneva 1928.

[xxvi] Paterson, Thomas G., J. Garry Clifford & Kenneth J. Hagan, *American Foreign Policy. A History since 1900*. Second Edition. Lexington, Mass. 1983, 305; McCoy, Donald R., *Calvin Coolidge, The Quiet President*. Reprint. Lawrence, Kansas 1988.

[xxvii] Kennedy 1989, 357—375; Pearton 1983, 177, 197—198.

[xxviii] Calculated in Eloranta 1998. See also Eloranta, Jari, 'Julkista ja yksityistä — maanpuolustuksen taloudelliset reaaliteetit 1920—1939'. In *Uusi institutionaalinen taloushistoria — Johdatus tutkimukseen.* Jyväskylä 1997.

[xxix] Eloranta 1998.

[xxx] Eloranta 1998. See also Kennedy 1989.

[xxxi] Hodne 1992, 82.

[xxxii] See Eloranta 1998 and Eloranta 2001 for further details on the British and French military spending patterns.

[xxxiii] See e.g. Stiglitz, Joseph E., *Economics of the Public Sector*. New York 1988, 41—42.

[xxxiv] The Granger non-causality concept, implying that one variable can be used to predict another temporally, is here considered as a *minimum* condition for the hypothesis of ME explaining economic growth to be plausible, without delving into more complex relationships. Inasmuch, it hardly constitutes a comprehensive measure of causality in a historical sense. On definitions of causality, see especially Ringer, Fritz K., 'Causal Analysis in Historical Reasoning'. *History and Theory - Studies in the Philosophy of History*, Vol. XXVIII, No. 2, 1989. On Granger-causality, see e.g. Gujarati, Damodar N., *Basic Econometrics*. Third Edition. Singapore 1995, 620—623 for details.

[xxxv] The results of the tests on the stationarity of the series can be obtained from the author by request. This approach relying on stationarity follows Chowdhury, Abdur R., 'A Causal Analysis of Defense Spending and Economic Growth'. *Journal of Conflict Resolution*, Vol. 35, No.1, 1991. There are, of course, other possibilities as well for time-series testing — see especially Harris, Richard, *Using Cointegration Analysis in Econometric Modelling*. London 1993.

[xxxvi] Detailed regression results available from the author by request.

[xxxvii] Eloranta 2000. For Italy and Japan, both ME series contained also colonial military spending, as discussed in Eloranta 2000. Detailed regression results available from the author by request.

[xxxviii] Eloranta 2002.

[xxxix] On a foreign policy perspective of the small nations during the interwar period, see e.g. Paasivirta, Juhani, *Pienet valtiot Euroopassa. Kansainvälisen järjestelmän muutoksia 1800- ja 1900-luvuilla*. Suomen Historiallinen Seura. Helsinki 1987.

[xl] Armstrong, David, Lorna Lloyd & John Redmond, *From Versailles to Maastricht International Organisation in the Twentieth Century*. Basingstoke 1996, 18—48.

[xli] Detailed regression results available from the author by request.

[xlii] Eloranta 1998; Eloranta, Jari, 'In Whose Interest? The Interaction of Public Decision-making and Private Interests in the Armaments Production of Finland and Sweden in the 1920s and 1930s'. In *Deindustrialization and Reindustrialization in 20th-century Europe*. Ed. by Franco Amatori, Andrea Colli and Nicola Crepas. European Business History Association (EBHA). Milano 1999.

[xliii] Roskill, Stephen, *Naval Policy Between the Wars. II: The Period of Reluctant Rearmament 1930—1939*. London 1976, 177, 361—364; Eloranta 2001.

[xliv] For a complete framework encompassing both national and international levels of influence and decision-making, see Eloranta 2002.

[xlv] Benefits of a pure public good are both nonexcludable and nonrival. See more e.g. Sandler-Hartley 1995, 4—5; Hummel, Jeffrey Rogers & Don Lavoie, 'National Defense and the Public-Goods Problem'. In *Arms, Politics, and the Economy. Historical and Contemporary Perspectives*. Ed. by Robert Higgs. Independent Institute. Oakland, CA. 1990.

[xlvi] On this see Eloranta 1998 for further details, especially on the institutional perspective. Also, Eloranta 2002.

[xlvii] Sandler-Hartley 1995.