

# MILITARY COMPETITION BETWEEN FRIENDS? HEGEMONIC DEVELOPMENT AND MILITARY SPENDING AMONG EIGHT WESTERN DEMOCRACIES, 1920-1938

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## ABSTRACT

This article explores the complicated phenomenon of military spending among a sample of eight Western democracies in the interwar period by analyzing especially the possibility of economic and/or military competition between the Western Great Powers and the ensuing impacts on the smaller states included here. The hegemonic paradigm suggested by e.g. Paul Kennedy predicts that the economic leader in a system will increasingly invest on maintaining security, thus eventually bringing economic growth to a halt. The military spending patterns respective of economic growth at first seem to suggest that not only the totalitarian states, as is the traditional view, but also the UK and France stepped in to fill the void created by the lack of American leadership. However, the military expenditures of these nations were too low to warrant the conclusion that they had any impact on their respective economic performance. This result is also verified here by employing Granger non-causality tests between the military spending and economic growth variables. Moreover, regression analysis on the military spending variables for the UK and France points towards competition on the level. The smaller states, respectively, seemed to follow the UK and France fairly closely in their military spending decisions.

## Introduction

This article explores some of the key aspects of military spending among eight Western democracies (Great Powers: the United Kingdom, France, and the United States; small states: Belgium, Denmark, Finland, Norway, and Sweden) during the interwar period. Military spending patterns are distinguished both by observing the shares of military expenditures (=ME) of GDP and the development of nominal and real ME. The possibility of hegemonic competition among the Great Powers, including the corresponding impacts on the smaller states, and the analysis of this "model" will form the focus of this article.

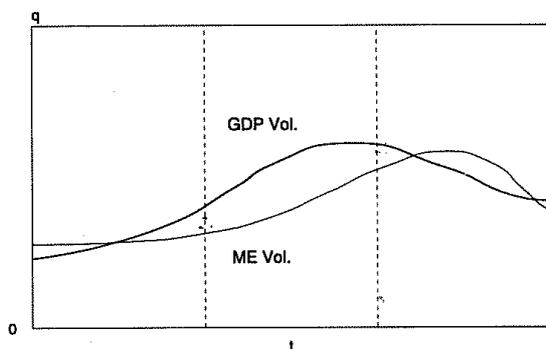
The study of military history, the most traditional research orientation in the study of crises and military spending, has been changing ever since the Second World War, especially in the last few decades. The New Military History, established in the United States in the 1960s, has been greatly influenced by such similar movements as the New Social History, the New Economic History, and the New Cultural History. Researchers advocating this approach, viewing military establishments and societies as inextricably

linked entities, have emphasized interdisciplinary approaches in their analysis. In Europe, such research has focused, among other things, on wartime economies and the economic burden of war.<sup>1</sup>

The study of military expenditures has also become an important part of the fragmented field of economics since the 1960s. Within this new field, *defense economics*, the focus of the research, however, has almost exclusively been placed on Cold War military spending comparisons. An important interdisciplinary contribution in this field, closely related to the state formation debate<sup>2</sup> and the study of international relations in general, is the argument that the "quest" for hegemony and, respectively, military security are intricately linked to economic growth. *Paul Kennedy* and *Robert Gilpin* are some of the proponents of this so-called hegemony paradigm, which builds on the idea of a systemic leader and follower countries and the competition between them for military and economic leadership. According to them, uneven economic development patterns cause nations to compete for economic and military prowess. The leader nation(s) thus 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. A built-in assumption in this hypothesis is that military spending eventually becomes harmful for economic development; a notion that has often been challenged.<sup>3</sup>

As seen in Figure 1, the development pattern suggested by the hegemonic theorists would have certain implications for both economic development and military spending. At  $t_0$ , the beginning of a "cycle" for a hegemon, GDP volume begins to grow much faster than ME volume, which becomes more pronounced at  $t_1$ . During this time span, the hegemon also initiates higher ME in order to secure its economic position. However, at  $t_2$ , GDP growth has already begun to decline, because of 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  $t_3$ , the burden of ME has also declined sharply, permitting a new period of growth.

Figure 1. Suggested Interaction Between Economic Development (GDP) and Military Spending (=ME) for the Hegemonic Leader Nation (=Hegemon)



Sources: Based on Keohane-Nye, *Power*; Kennedy, *Rise and Fall of the Great Powers*, xv—xvi. Note that the challengers would react accordingly to follow the leader's behavior.

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If we look at the 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 67 per cent; in 1938 this share was 73 per cent. Hence, the United States was the unambiguous economic leader of the interwar period; a position which had emerged latest by the beginning of the century.<sup>4</sup> However, the American economic leadership did not extend to political leadership, as hegemonic theorists often presume. According to *Charles Kindleberger*, a significant feature of the 1920s was the absence of any military leader nation in the world.<sup>5</sup> As Paul Kennedy, too, has noted, the 1919 American withdrawal, in addition to Russian isolationism, put the international system “out of joint” with economic realities, thus suggesting a period not necessarily complying to the hegemonic development pattern. The United Kingdom and France, although weakened, were at the center stage diplomatically until their position was challenged in the 1930s by the militarized states of Italy, Japan, and Germany.<sup>6</sup> The purpose here is first to see what kind of implications this situation posed especially for the military spending of the Western Great Powers: the United States, the United Kingdom, and France.

The first testable hypothesis, based on the development pattern presented in Figure 1, relates to whether a country's poor economic performance can be linked to wasted economic potential embodied in military expenditures. Yet, as recent studies have shown, economic development is often more significant in explaining military spending rather than vice versa.<sup>7</sup> In order for *military burden* (= percentage of military expenditures of GDP or GNP) to hinder economic performance, it would have to dominate the economy, such as is often the case in wartime. In this article, the hypothesis that economic growth could be driven by military spending behavior (=the hegemonic proposition) or instead vice versa is explored by utilizing Granger non-causality tests on the corresponding variables for the United States, the United Kingdom, and France. Secondly, we can test whether the two “follower” states, the 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 with the Americans, then they did not act as followers. Small nations, which Kennedy's study does not cover, can be considered the ultimate followers in this framework, lacking the ability to challenge others for leadership. For example, small nations<sup>8</sup> were the would-be sources of exclusive bilateral trade, new and possibly scarce resources for a Great Power, or even targets for new territorial acquisitions. Analysis of the respective military spending patterns of these nations indicate additional challenges to the hegemonic framework; i.e., who did they follow in their military spending decisions and why.

The countries selected here, a limited sample based on *Eloranta* (1998), consist of only some of the Western democracies in the period, all possessing democratic political institutions instead of clearly totalitarian 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<sup>9</sup> are often controversial. Data prob-

lems also advocate the exclusion of, for example, most of the Eastern European states, such as Poland.<sup>10</sup> Moreover, the interaction of the political system and the economy in a dictatorship pose some further theoretical challenges, which lie beyond the scope of such a brief article.<sup>11</sup>

What do military expenditures here consist of? There have been various definitions for the term.<sup>12</sup> 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.<sup>13</sup> Here, contrary to Pryor, spending on military construction and national security troops is included.<sup>14</sup> 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, for example, in 1925—1927.<sup>15</sup> The American nominal ME is also converted into real terms in Figure 2, which is often an ambiguous exercise.<sup>16</sup> In this study, the deflator used in such a conversion to real terms has been the wholesale price index, despite its obvious weaknesses.

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 hypothesis 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.

#### **LACK OF AMERICAN LEADERSHIP? THE MILITARY SPENDING OF THE UNITED STATES, THE UNITED KINGDOM, AND FRANCE, 1920—1938**

American isolationism has inspired a lot of debate over its extent and impact on the world affairs during the interwar period. Paul Kennedy refers to the American position as “at least relative diplomatic isolationism.”<sup>17</sup> *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, which persisted throughout the interwar period, that Europe would have to solve its own problems without American involvement.<sup>18</sup>

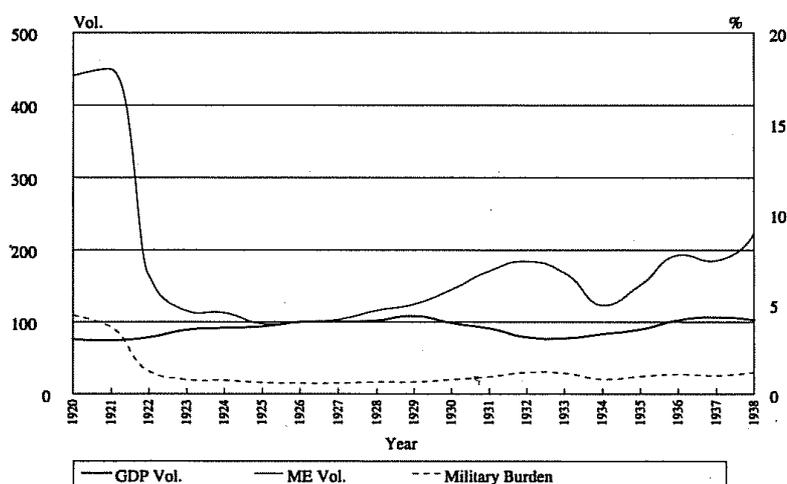
The American Republican Administrations of the 1920s, despite their isolationist tendencies, did pursue limited international cooperation on disarmament. These efforts were intended to avoid any connection with the League of Nations, which meant cooperation outside an internationally binding organization.<sup>19</sup> The purpose of these efforts was to create a world of peaceful nations characterized by economic and political stability, with the emphasis on non-military means of enforcing such principles, thus minimizing possible American engagement in “European problems.”<sup>20</sup>

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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 a vacuum in which these traditional Great Powers might 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 pre-occupied with extra-European problems, namely keeping her vast Empire from disintegrating. In 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, destroyed this illusion.<sup>21</sup> How did this situation affect their military spending decisions?

The overall development of military expenditures turned out very differently for the countries selected here. In the United States, military expenditures dropped significantly after the Great War, and the 1920s in general brought about federal expenditure cuts. Military expenditures also remained quite low in the United States throughout the 1930s (see Figure 2). The United Kingdom and France, however, put greater resources into their military security, both in terms of real ME and military burden.<sup>22</sup> A key question is how much a country is able to pay for its external security. Of these countries, the United States had by far the greatest resources to build up its military stock. The United States was, nevertheless, a reluctant leader in the world economy in the 1920s, and the American economy experienced the most severe depression of these eight countries. In relative terms, the United Kingdom and France seemed considerably more eager to devote resources to military purposes.<sup>23</sup>

Figure 2. Economic Development and Military Spending in the United States (=Economic Leader) During the Interwar Period 1926=100



Sources: GDP volume from Maddison, *Monitoring*; ME volume and military burden (of GNP), calculated from *Historical Statistics*, using the wholesale price index obtained from Mitchell, *International Historical Statistics: the Americas*.

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The depression of the early 1930s — or in the case of the United States, the entire 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. Nonetheless, the downturn of the American economy left room for other nations to emerge on the scene in the international struggle for leadership. Among the new challengers were, of course, the dictatorships such as Germany and Japan. Of the eight democracies, the United Kingdom and France also seemed to respond to the challenge, especially in the late 1930s.<sup>24</sup>

The hegemony paradigm, as advocated by Paul Kennedy, implies competition for economic and political resources between the leader(s) and follower nations. If leadership, economic or political, is not forthcoming from the leader, the system is faced with the task of creating a new leader. This struggle for power means increased armaments spending and international power conflicts.<sup>25</sup> We have already discerned how the world economic leader failed to follow the hegemonic pattern during the 1920s. However, the latter part of the 1920s as well as the 1930s might at first seem to fit this pattern, at least superficially. When the economic development (=GDP volume) began to weaken in late 1929, the military expenditures still continued to grow (=ME volume). Yet in the late 1930s, the American military burden grew only slightly.

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 political leadership. British military spending, which was particularly high right after the end of the First World War, grew strongly again in the late 1920s and throughout the 1930s. Her military burden, however, stayed at a high level throughout the time period and increased further in the late 1930s. 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 depression as the United States, which enabled continued investments in the armed forces. As far as hegemonic competition is concerned, the British pattern of military spending does not contest the basic ideas behind it, although the same reservations apply as in the American case. Moreover, increases in the early 1930s British military spending can hardly be explained merely in terms of a challenge towards world leadership on her part.<sup>26</sup>

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 fits the French pattern of military spending from the end of the 1920s onwards. Whereas her economic performance was modest in the 1930s, the military expenditures increased, most likely due to the German challenge, during almost the entire decade. The same applies to the military burden. In the French case, it would be possible to argue, in the terms of hegemonic competition, that the economy could not withstand the military burden. And, as Paul Kennedy has pointed out, the economic weakening was irreversibly connected to the turmoil in domestic politics in the 1930s.<sup>27</sup>

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### INTERDEPENDENCE OF ECONOMIC GROWTH AND MILITARY SPENDING: Beyond the Hegemonic Paradigm

Hegemonic theorists argue that military spending and economic growth are interdependent, because military expenditures are considered a waste of economic resources. The inevitable increases in such harmful production would then lead to a declining economy. In the interwar period, the military spending of these countries could not have had a huge impact on their economic performance. For example, the American interwar military burden was, except for 1920—1922, between 0.6 and 1.3 per cent, whereas during the 1950s, during the Cold War, the American military burden was often over ten per cent.<sup>28</sup> Thus, the conclusion must be that the meager burden imposed by the military spending of the interwar years could not have been very significant for the development of the whole economy. The conclusion could be the exact opposite: military spending was, in fact, dependent on the development of the economy and economic rivalry in general. Firstly, we can attempt to verify the “causal” links between GDP and ME by applying Granger non-causality tests for the military spending and economic growth variables.

Granger causality can be represented as

$$X_t = \sum_{i=1}^m a_i X_{t-i} + \sum_{j=1}^n b_j Y_{t-j} + e_{1t} \quad (1)$$

$$Y_t = \sum_{i=1}^k c_i Y_{t-i} + \sum_{j=1}^p d_j X_{t-j} + e_{2t} \quad (2)$$

where the possible links between X and Y are verified by testing the following null hypotheses:  $b_j = 0$  and  $d_j = 0$ , in addition to testing the validity of the lagged values of X and Y in predicting their performance. If, for example, the former hypothesis is rejected, Y Granger causes X, and vice versa. If both X and Y are rejected, there is interaction between X and Y; the failure to reject both of the above hypotheses would imply independence between these variables. Granger causality can be understood as a very weak “causal” link between variables. Here these relationships were tested for both nominal ME and nominal GDP (GNP for the UK and USA), as well as for the military burden and (real) GDP per capita in these eight countries. Due to potential problems of autocorrelation and nonstationarity, logarithmic forms of the variables were preferred. The assumption of stationarity, based on the ADF-unit root tests, was valid for most of the variables in this period, with few exceptions (details on differencing can be found in the tables).<sup>29</sup> Equally, if the tests on both nominal series and the “relative” levels indicated the same direction of Granger causality, they were considered reliable. Table 1 contains the results of the tests on the Granger non-causality relationships for the three Western Great Powers, tested for optimum lag length from the maximum of

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five years to one year, with longer lag structure and acceptance at many lags indicating higher reliability for the test.

Table 1. Granger Non-Causality Relationships between Nominal ME and Nominal GNP or GDP, and Military Burden and Real GDP per Capita in USA, UK, and France, 1920(1922)-1938

DEPENDENT VARIABLE	INDEPENDENT VARIABLE	NUMBER OF LAGS (FOR BEST $p$ )	BEST $p$ -VALUE
<b>1. USA (1920—1938):</b>			
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
<b>2. UK (1920—1938):</b>			
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
<b>3. FRA (1922—1938):</b>			
ME nom.	GDP nom.	3†	0.017
GDP nom.	ME nom.	5	0.047
MILBUR	GDP per cap.	1	0.047
GDP per cap.	MILBUR	1	0.525

Sources: see Figure 2; UK: real GDP per cap. from Maddison, *Monitoring*, nominal ME and GNP from Sefton-Weale, *Reconciliation*; France: real GDP per cap. from Maddison, *Monitoring*, nominal ME from *Annuaire Statistique* (1919-1941), nominal GDP from Mitchell, *International Historical Statistics: Europe*. ME figures for years 1920 and 1921 were not available in the above source for France. All variables are in logarithmic form. Note: UK MILBUR is  $I(2)$ . † = null rejected at more than one lag.

Table 1 indicates that although US nominal ME seemed to be Granger caused by nominal GDP, this causation cannot be supported by the respective Granger tests on the military burden and GDP per capita. Thus, US military spending and GNP can 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 growth. 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. The results arising from the French case differed from the UK case: military spending can be regarded Granger caused by economic growth (although in the case of MILBUR this is doubtful due to only a lag of one), yet not vice versa. Therefore, the first assumption arising from the hegemonic paradigm — i.e., the dependence of economic growth on military spending levels — applied only to the UK case.

One can also analyze the leader-follower pattern by regressing the British and French nominal ME and military burdens 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

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were considered more robust if the regressions were significant for both the variables, nominal ME (indicating a more direct link) and military burden (indicating a more structural relationship), with both indicating the same results.

Table 2. Regressions on the British and French Military Spending (Nominal ME and Military Burdens as Dependent Variables, Log) with the US Military Spending (Nominal ME and Military Burden as Independent Variables, Log) on the Level and Lagged, 1920/1922—1938

DEPENDENT VARIABLE	INDEPENDENT VARIABLE	COEFFICIENTS
<b>1. NOMINAL ME:</b>		
UK ME nom.	US ME nom.	0.36 ** ( $R^2 = 0.29$ )
UK ME nom.	US ME nom. (t-1)	0.18
UK ME nom.	US ME nom. (t-2)	-0.03
FRA ME nom.	US ME nom.	0.92 * ( $R^2 = 0.17$ )
FRA ME nom.	US ME nom. (t-1)	-0.12
FRA ME nom.	US ME nom. (t-2)	-0.30 * ( $R^2 = 0.14$ )
<b>2. MILITARY BURDEN</b>		
UK MILBUR	US MILBUR	-0.07
UK MILBUR	US MILBUR (t-1)	-0.12 ** ( $R^2 = 0.19$ )
UK MILBUR	US MILBUR (t-2)	-0.06
FRA MILBUR	US MILBUR	0.67 *** ( $R^2 = 0.53$ )
FRA MILBUR	US MILBUR (t-1)	0.20
FRA MILBUR	US MILBUR (t-2)	0.04

Sources: see Figure 2; Table 1. \* = null hypothesis of no correlation rejected at 10 per cent level; \*\* = null rejected at 5 per cent level; \*\*\* = null rejected at 1 per cent level.

Note: UK MILBUR is  $I(2)$ .

In the UK case, the nominal ME seem to point towards competition with the US on the level, whereas the regression on military burden indicates a significant relationship with a lag of one year on the US military burden. These contradictory results thus suggest only a vague relationship between the UK and US military expenditures, with the results on the nominal ME providing a more convincing case (higher adjusted  $R^2$  and significance level) of competition on the level. The French case was quite unambiguous; there seems to be enough evidence to suggest military competition on the level with the US. Overall, as summarized in Table 2, both the United Kingdom and France seem to have abided by a pattern of immediate responses to the US military spending. Also, there seems to have been an element of competition in armaments between the economic leader and, respectively, the "challengers". Moreover, a regression on the British and French nominal ME on the level<sup>30</sup> points towards competition between these two countries. These results cast considerable doubt in the validity of the leader-follower pattern between these countries in the interwar period, at least in such a simplistic form.

What about the small countries selected here? After all, these countries were not included in Paul Kennedy's seminal study. First it must be noted, as mentioned earlier, that the threats experienced by these countries varied greatly. The political and economic positions of smaller nations were of course quite different from the Great Powers. For the small countries selected here, the overall economic performance of the period was fairly favorable and the impact of the Great Depression not very long-lasting. Their respective military expenditures increased slightly during the course of

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Table 3. Granger Non-Causality Relationships between Nominal ME and Nominal GDP, and Military Burden and Real GDP per Capita in Belgium, Denmark, Finland, Norway, and Sweden, 1920–1938

DEPENDENT VARIABLE	INDEPENDENT VARIABLE	NUMBER OF LAGS (FOR BEST $p$ )	BEST $p$ -VALUE
<b>1. BEL:</b>			
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
<b>2. DEN:</b>			
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
<b>3. FIN:</b>			
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
<b>4. NOR:</b>			
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
<b>5. SWE:</b>			
ME nom.	GDP nom.	1	0.331
GDP nom.	ME nom.	5	0.048
MILBUR	GDP per cap.	2†	0.011
GDP per cap.	MILBUR	1	0.840

Sources: real GDP per capita for all from Maddison, *Monitoring*. Belgian nominal GDP from Buyst, 'New GNP' and nominal ME from Clement, *De Belgische*; Danish nominal GDP and nominal ME from Johansen, *Dansk*; Finnish nominal GDP from Hjerpe, *Suomen talous*, nominal ME from Tervasmäki, *Eduskuntaryhmitt*; Norwegian nominal GDP from *NOS XII*, nominal ME from *Historisk Statistikk*; Swedish nominal GDP from Krantz, *Swedish*, nominal ME from *Statistisk Årsbok för Sverige* (1919-1941). All variables in logarithmic form. Note: DEN GDP nom. is  $I(1)$ , SWE ME nom.  $I(2)$ , and SWE MILBUR  $I(1)$ . † = null rejected at more than one lag.

the 1930s, yet their combined military burden remained quite even throughout the decade. As seen in Table 3, there were Granger-causality links between the military spending and economic growth variables for most of these countries. Especially in the Finnish case, there seemed to be strong interaction between both the nominal and the structural variables. In the Norwegian case, the military spending variables were Granger caused by economic growth. In the other cases, however, the results either pointed at opposite directions or suggested relative independence between the variables.

Did the military spending behavior of the economic leader, the United States, have any implications for these countries? Without exception, these countries were dependent on maintaining good political and trade relations with the European Great Powers, the United Kingdom and France (in addition to Germany in the 1930s), especially in the absence of an American commitment. However, especially the failure of the League of Nations, the organization in which the small countries were active and which they hoped would guarantee peace, had a devastating effect on the security aspirations of small European nations. The basic principle underlying the League of Nations was the preservation of collective security, yet this goal was undermined right

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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. 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.<sup>31</sup>

Small democracies thus relied on French and British protection in their military spending decisions. For example, in the Belgian case the military alliance with France exerted a positive influence on Belgian military spending, along with some lagged British influence. Interestingly enough, Belgium is also the only country of the five to show *any* statistical sensitivity to the US military spending variables. 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 case there was a distinct tendency to free-ride on the security efforts of these two Great Powers.<sup>32</sup>

### EPILOGUE: Further Challenges

It is highly problematic to attempt analysis of military spending from the hegemonic competition perspective alone. Military expenditure analysis should try to combine both external factors and internal factors in the explanations. This also corresponds with the analysis of any public good.<sup>33</sup> The definition of a public good excludes simple explanations. Military spending decision-making, often a source of controversy in the political spectrum, is also subject to the same historical and institutional continuities and discontinuities as other fields of public policymaking.<sup>34</sup>

The hegemonic framework can perhaps be reduced to two testable hypothesis: 1) Military spending and economic growth are interdependent, with military spending being 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 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. It seems that for example the United Kingdom and France made their military budget decisions simultaneously to the United States, a clear indication of the lack of follower behavior; moreover, there was an element of competition especially in naval armaments between the so-called followers and the "leader". 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. They responded

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to the rearmament drive of the 1930s only reluctantly in the closing years of the decade, clearly following France and the UK in their military spending decisions.

The hegemonic paradigm undoubtedly has some important contributions to offer for the study of crises and world economic order. It has definite merit in its attempt to understand the impact of military spending and competition for economic and political leadership, especially in a particular system. However, it should not be offered as a comprehensive, deterministic theory any more than some other theoretical framework. A good explanation of military spending in any time period should include a comprehensive coverage of both internal and external factors.<sup>35</sup> Naturally, there are many more challenges ahead in the study of military spending among Western democracies during the interwar period. More concrete ways of measuring the impact of hegemonic competition are needed, especially in order to estimate the supply and demand side developments, as well as to calculate the impact of military spending on economic growth, either as a hindrance or a benefit to the economy.<sup>36</sup> 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.<sup>37</sup>

### Notes

1. Paret, *Understanding War*, 221. See also Howard, Michael, *Studies in War and Peace* (Viking Press: New York 1971). On an economic history variant, see e.g. Harrison, Mark, *Accounting for war: Soviet production, employment, and the defence burden, 1940—1945* (Cambridge 1996). On the so-called new histories, see i.e. Olábarri, Ignacio, 'A 'New' New History: A Longue Duree Structure'. *History and Theory. Studies in the Philosophy of History*, Vol. 34, No. 1 (1995): 10—12, 17—24; Iggers, Georg G., *New Directions in European Historiography*. Revised Edition (Middletown, Connecticut 1984); on cliometrics, for example, see McCloskey, Donald N., *Econometric History*. Studies in Economic and Social History (London 1987).

2. See e.g. Tilly, Charles, *Coercion, Capital, and European States, A.D. 990—1990* (Basil Blackwell: Cambridge 1990), 6-14.

3. Kennedy, Paul, *The Rise and Fall of the Great Powers. Economic Change and Military Conflict from 1500 to 2000* (Vintage: London 1989); Gilpin, Robert, *The Political Economy of International Relations* (Princeton University Press: 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* (Oxford University Press: New York 1991); Kennedy, Paul, *The Rise and Fall of British Naval Mastery*. Third Edition (Fontana Press: London 1991). Kennedy makes only vague suggestions that the interwar period was somehow exceptional. See more Hodne, 'New Perspectives', 82; Kindleberger, Charles, *The World in Depression 1929—1939* (Allen Lane: London 1973). On criticism of Kennedy's notions, see especially Sandler, Todd & Keith Hartley, *The Economics of Defense*. Cambridge Surveys of Economic Literature (Cambridge University Press: Cambridge 1995) and the studies listed in it.

4. See Maddison, Angus, *Monitoring the World Economy 1820—1992*. OECD (OECD Publications and Information Centre: Paris 1995).

5. Kindleberger, *The World in Depression*.

6. Kennedy, *The Rise and Fall of the Great Powers*, xxi.

7. On other criticism of Kennedy's framework, see i.e. Sandler-Hartley, *The Economics of Defense*; Gold, David & Gordon Adams, 'Defence Spending and the American Economy'. *Defence Economics*, Vol. 1 (1990).

8. 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, (Kirjayhtymä: Helsinki 1987).

9. See e.g. Abelschauser, 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 University Press:

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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, i.e. the Baltic nations. See van Ark, Bart, 'Towards European Historical National Accounts'. *Scandinavian Economic History Review*, Vol. XLIII, No. 1 (1995) for an overview. For details on the Soviet national accounts, see Kudrov, Valentin, 'National Accounts and International Comparisons for the Former Soviet Union'. *Scandinavian Economic History Review*, Vol. XLIII, No. 1 (1995).

10. There are some sources available for such data, of which the best is Banks, Arthur S., *Cross-Polity, Time-Series Data* (MIT Press: Cambridge, Mass. 1971). However, the macroeconomic data behind the figures are outdated. See also 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).

11. 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). Another interesting approach is Bardini, Carlo, 'Dictatorship and catching-up. The use of benchmark productivity comparisons to evaluate the impact of fascism on Italian industrial convergence'. In *Historical Benchmark Comparisons of Output and Productivity, 1750—1990*. Workshop in Quantitative Economic History, Leuven (1996).

12. The term military expenditures is preferred here instead of defense expenditures (cf. Pryor, Frederick L., *Public Expenditures in Communist and Capitalist Nations* [George Allen and Unwin: London 1968]) to avoid value judgements on the purpose of these outlays. See also Herrera, Rémy, *Statistics on Military Expenditure in Developing Countries: Concepts, Methodological Problems and Sources*. Development Centre Documents. OECD, (OECD Publications and Information Centre: Paris 1994), 13—14.

13. Pryor, *Public Expenditures*, 85—86.

14. However, the funding for the Civic Guards in Finland, for example, came also from other sources than from the public authorities. Civil defense expenditures, small in quantity, are excluded in other cases besides the UK. See Eloranta, *Different Needs* for details.

15. 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).

16. The optimal way of converting the military expenditures would be to deflate the individual components of the military spending with the corresponding indices, like e.g. Charles Feinstein explains in his 1972 study. See e.g. Feinstein, C.H., *National Income, Expenditure and Output of the United Kingdom 1855—1965* (Cambridge University Press: Cambridge 1972), 79.

17. Kennedy, *The Rise and Fall of the Great Powers*, 357.

18. Paterson, Thomas G., J. Garry Clifford & Kenneth J. Hagan, *American Foreign Policy. A History since 1900*. Second Edition (Heath: Lexington, Mass. 1983), 305; McCoy, Donald R., *Calvin Coolidge, The Quiet President*. Reprint (University Press of Kansas: Lawrence, Kansas 1988). See also Eloranta, Jari, *Calvin Coolidge and National Defense 1923—1929. The Impossible Equation: Peace, Economy, and Adequate Defense In His Public Speeches*. A Thesis in General History at the University of Jyväskylä (1995).

19. Bemis, Samuel Flagg, *A Short History of American Foreign Policy and Diplomacy* (Henry Holt and Company, Inc.: New York 1959), 479; *American Foreign Policy. A Documentary Survey 1776—1960*. Ed. by Dorothy Burne Goebel (Holt, Rinehart and Winston: New York 1961), 243.

20. Paterson et al., *American Foreign Policy*, 305.

21. Kennedy, *The Rise and Fall of the Great Powers*, 357—375; Pearton, Maurice, *The Knowledgeable State. Diplomacy, War and Technology since 1830* (Burnett Books: London 1982), 177, 197—198.

22. Calculated in Eloranta, *Different Needs*. See also Eloranta, Jari, 'Julkista ja yksityistä — maanpuolustuksen taloudelliset reaali-teetit 1920—1939'. In *Uusi institutionaalinen taloushistoria — Johdatus tutkimukseen* (Atena Kustannus: Jyväskylä 1997).

23. Eloranta, *Different Needs*.

24. Eloranta, *Different Needs*. See also Kennedy, *The Rise and Fall of the Great Powers*.

25. Hodne, *New Perspectives*, 82.

26. Eloranta, *Different Needs*.

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27. Kennedy, *The Rise and Fall of the Great Powers*, 403—404.
28. See e.g. Stiglitz, Joseph E., *Economics of the Public Sector* (Norton: New York 1988), 41—42.
29. ADF = Augmented Dickey Fuller. 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 (March 1991). There are, of course, other possibilities as well for time-series testing — see especially Harris, Richard, *Using Cointegration Analysis in Econometric Modelling* (Prentice Hall/Harvester Wheatsheaf: London 1993). On testing for structural breaks, see e.g. Bianchi, Marco, *Granger Causality in the Presence of Structural Changes*. Discussion Paper no. 9518 (Département des Sciences Economiques Université Catholique de Louvain: Louvain 1995).
30. Regression results are not listed here in order to save space. Available from the author by request.
31. Armstrong, David, Lorna Lloyd & John Redmond, *From Versailles to Maastricht International Organisation in the Twentieth Century* (Macmillan: Basingstoke 1996), 18—48.
32. Results of the regressions available from the author by request.
33. Benefits of a pure public good are both nonexcludable and nonrival. See more e.g. Sandler-Hartley, *The Economics of Defense*, 4—5. On further analysis, see 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 (Holmes & Meier Publishers: Oakland, CA. 1990).
34. On this see Eloranta, *Different Needs* for further details, especially on an institutional perspective.
35. Mylly, Juhani, *Maalaisliitto ja turvallisuuspolitiikka. Suomen ulkopolitiikka ja turvallisuuskysymykset agnaraipuolueen politiikassa maan itsenäistymisestä talvisotaan. I. Aktiivisesta heimopolitiikasta passiiviseen isolatoon 1918—1933*. Turun yliopiston julkaisuja C. 21 (Turun yliopisto: Turku 1978); also, Eloranta, *Different Needs*.
36. Sandler-Hartley, *The Economics of Defense*.
37. See e.g. Eloranta, *Different Needs*.

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