THWARTING THE "MERCHANTS OF DEATH" ACCUSATION: THE POLITICAL ECONOMY OF MILITARY PROCUREMENT IN INDUSTRIAL DEMOCRACIES DURING THE INTERWAR PERIOD

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This article charts the interwar military procurement practices of several democratic states, concentrating on the United States, the United Kingdom, Sweden, and Finland. In addition to comparing some of the foundations of the Allies' successful industrial mobilization in World War II, this article concludes that interwar procurement practices in some of the most liberal democracies were surprisingly resistant to capture by business interests. This finding suggests that in describing this era, we should be cautious about ascribing causal power to trans-historical economic behaviors such as rent-seeking and collusion, without taking into account the institutional setting in which such activities took place. The record of the interwar period suggests that democracies can use bureaucratic administration and public enterprise to establish robust barriers to rent-seeking and corruption in the military economy. During the interwar period, these administrative barriers were erected in conjunction with intense public concern about military profiteering. Whether they would be less effective in different ideological environments deserves further investigation.

Although there is a large literature on military doctrine between the World Wars, until recently, few have investigated the politics and economics of military acquisitions during this critical period.[1] Economic historians have focused mostly on the economics of the various conflicts and the immediate

effects of wartime mobilization.[2] This focus leaves us with a weak understanding of interwar government-business relations and of the foundations of the massive industrial mobilizations for World War II. This article addresses this subject by charting the interwar military procurement practices of several democratic states: the United States (US), the United Kingdom (UK), Sweden, and Finland. Although these four cases do not comprise an exhaustive list of relatively liberal, industrialized democratic states in the early 20th century, they allow us to consider the dynamics of interwar procurement in states that maintained democratic political systems and military procurement methods that relied heavily on private firms. These characteristics make these four cases especially relevant both for students of 21st-century military economy and historians of World War II.

In addition to comparing some of the foundations of the Allies' successful industrial mobilization for World War II, this article concludes that interwar procurement practices of democracies were quite resistant to capture by business interests. The evidence suggests we should be cautious about ascribing causal power to trans-historical economic behaviors such as rent-seeking and collusion, without taking into account the institutional setting in which such activities took place during this era. Whereas certain assumptions about economics and politics in industrial capitalist democracies might predict that armaments industries and individual firms would have enjoyed high profits during periods of high spending levels, these are hard to find, or at least quantify, in the historical record. This finding is hardly surprising in itself, given that *abnormally* high profits, implying effective rent seeking or collusion as the cause, were uncommon even during the Cold War era of military-industrial complexes.[3] What stands out instead is the powerful limiting influence that the combination of the post-World War I demobilization, the global economic downturn of the early 1930s, procurement law, and competition from public enterprise exerted on arms suppliers' market power and profits.

Many factors influenced military spending levels in the 1920s and 1930s. Among these factors were the "hangover" from World War I and its devastation, the reconstruction efforts, the relatively inefficient efforts by the League of Nations to promote disarmament measures, and the ferocity of the Great Depression and the launch of authoritarian regimes in its aftermath. In the interwar period, despite political pressures, democracies found it difficult to cut public expenditures, leading government spending to higher levels for many countries. These increases in spending meant that, although in many democratic countries *defense shares* (military expenditures as a percentage of central or federal government expenditures) dropped noticeably, their respective *military burdens* (military expenditures as a percentage of GDP) stayed at similar levels or even increased.

The four capitalist democracies discussed here might be called "late rearmers," in contrast to the Soviet Union, Germany, and Japan, which were rearming substantially by the early 1930s. Like France, the UK began to rearm in

the mid-1930s. Finland maintained a military burden comparable to that of the UK for much of the period. In other countries that rearmed even later, military expenditures remained low into the late 1930s. Sweden is a good example of an active pursuer of disarmament throughout the period. Until 1939, its military burden remained meager — below 2 percent. The same was true of the US, the world's largest national economy (see Table 1).[4]

Table 1. Finland, Sweden, UK, and the US in 1920 and 1938

Country/Year		*GDP per capita in 1990 Geary-Khamiis dollars*	*Agricultural share of total employment (%)*	*Democracy index (Polity)*	*Military burden (military expenditures as percentage of GDP)*	*Central or federal government expenditures as percentage of GDP*	*Exports + imports as percentage of GDP*
FIN	1920	1,792	59.8	10	3.0	15.3	48.0
	1938	3,486	45.9	7	3.8	14.1	43.9
SWE	1920	2,802	40.7	10	2.1	07.6	44.9
	1938	4,725	36.0	10	1.7	11.9	34.2
UK	1920	4,651	7.1	8	3.1	19.1	60.2
	1938	5,983	6.0	10	6.5	18.1	28.7
US	1920	5,552	27.4	10	2.6	6.9	15.0
	1938	6,126	22.0	10	1.5	7.9	6.2

Sources: GDP per capita in 1990 Geary-Khamis dollars from Angus Maddison, *Monitoring the World Economy 1820-1992* (Paris: OECD, 1995); democracy indices from Kristian Gleditsch, "Polity IIID Database," (K. Gleditsch [producer], 2000). Available from: http://www.prio.no/CSCW/Datasets/Governance/The-Polity-IIId-project/; agricultural share of total employment (except the Finnish share from Riitta Hjerppe, *Suomen Talous 1860-1985. Kasvu ja Rakennemuutos.* Vol. XIII, Kasvututkimuksia (Suomen Pankki, 1988) and franchised share of adults from the database underlying Peter H. Lindert, *Voice and Growth: Was Churchill Right?* (Cambridge, MA: National Bureau of Economic Research, 2003); military burdens, central government spending, and trade shares from Jari Eloranta, "External Security by Domestic Choices: Military Spending as an Impure Public Good among Eleven European States, 1920-1938" (dissertation, European University Institute, 2002).

The military burden data suggest that the four nations discussed here differ in some important ways, but were similar according to many measures of economic and political development (see Table 1). Of the four nations, Finland had the least settled institutions and organizational structure, having only become independent in 1917 and having endured a civil war in 1918. In Sweden and Britain, political markets were more mature and the rules of the game were clearer. Also, interest groups had been in existence longer and thus had more experience in cooperating and competing with one another. In the US, interest groups were relatively unorganized, which weakened their bargaining power. Institutional economists would likely predict that Finland, the least politically "mature" of the four, would experience the most rent-seeking and collusion in military procurement.[5] They might also expect that Finland and Sweden, as smaller and more peripheral national economies, would be more likely to protect domestic producers with trade barriers. While some of these variations

did occur, the four nations also had many commonalities in their approaches to interwar procurement. Arguably, the commonalities constituted a democratic approach to managing the military economy that created robust limits on rent-seeking and collusion.

"An alliance of governments with war industries," wrote H.C. Engelbrecht and F.C. Hanigan in their 1934 history of the arms business, *Merchants of Death*, "threatens to make the arms makers supreme in economic life and after that in government."[6] After the Great War, such statements were commonplace in popular politics and culture throughout the world. Many assumed that the firms that supplied armaments wielded great political power, allowing them to arrange profitable military orders, domestically and abroad.[7]

However, the historical record suggests that the actual influence of armaments suppliers and business associations during the interwar years was far more limited. Businessmen were hard pressed to secure large, profitable defense orders, for three important reasons. First, relatively little funding was available, at least until the mid-1930s. Second, a very high level of public concern with profiteering discouraged public and private actors from successful rent-seeking. Third, by the end of the Great War, governments had developed formal institutions such as procurement bureaus and laws that helped to keep even the largest business associations or best-connected firms from reaping large gains from defense work.

The UK illustrates all of these points. Recent work has shown that, despite its relative decline, the UK continued to be a global leader in armaments.[8] However, the relatively low level of military spending after World War I discouraged rent-seeking.[9] Many British shipbuilders encountered difficulties; the Admiralty resorted to direct subsidies for some firms, while letting others perish.[10] Demand was low even in the growing sphere of aircraft production. Several firms left this business; Sopwith, a leading aircraft maker during the war, failed within months after the Armistice. Meanwhile, the nation's two leading armaments firms, Vickers and Armstrong, merged in 1927. Remembering such postwar bankruptcies and mergers, British business leaders entered the rearmament period understanding defense work as a risky business.[11]

At the same time, the structure of British procurement authority kept business interests at arm's length. Several bodies were under the umbrella of the Committee of Imperial Defense (CID). The government created the Contracts Coordinating Committee (CCC) in 1920 to plan industrial mobilization and reform purchasing policy. The government also established the Principal Supply Officers Committee (PSOC) in 1924 to coordinate interservice acquisitions.[12] Civil servants and military officers staffed these bodies, reducing the chances they would become dominated by business. Indeed, the CCC and the Federation of British Industries (FBI), the country's largest industrial trade group (established in 1916), had several disagreements over acquisition issues. For much of the period, squabbles within the FBI, its conservative and cautious policies, and its strained relationship with the Labour Party weakened the FBI's influence over government policy.[13]

In contrast to the UK, a central concern in Sweden and Finland was the threat of foreign competition. Here, along with business efforts to prevent nationalization of armaments industries, was one area in which interwar business lobbies often achieved their goals. In Sweden, where the political climate and the mature industrial base left comparatively little room for extensive rent seeking vis-à-vis dwindling military contracts, industry managed to limit nationalization and secure favorable treatment for domestic suppliers. The Federation of Swedish Industries (*Sveriges Industriförbundet*, FSI), one of the Swedish national peak associations, took an active role in promoting domestic industries in government acquisitions in the 1920s. The FSI succeeded in convincing the government to issue informal rules stating that Swedish products should be awarded preference in government acquisitions.[14]

In Finland, the protections offered to domestic producers were even more considerable. By the late 1920s, Finnish firms enjoyed price advantages of up to 20 percent in government procurement.[15] This protection was the result of lobbying by the Federation of Finnish Industries (*Teollisuusliitto*, FFI) and was an important manifestation of the intimate relationship between Finnish business and the government. In contrast to other industrial democracies, Finland had relatively immature government institutions that were less independent of other actors. For example, the Board of Acquisitions in the Ministry of Defence, which maintained a tight control of military acquisitions, consisted of members of the business associations, including the FFI. This intimate relationship led to a strong emphasis on domestic military production. While the FFI temporarily lost its strong grip on government contracts at the end of the 1920s, it regained that grip during the Depression years.[16]

In the US and UK, the interwar years were a time of low procurement expenditures, overseen by complex acquisition bureaucracies. American procurement authorities sometimes cultivated close relationships with industry leaders. But these rarely resulted in comfortable levels of profitable military orders. Like their counterparts in Britain, many American firms that had benefited from large Great War orders encountered severe difficulties in surviving the sharp postwar recession. From 1919 through the end of the 1930s, Congress appropriated modest sums to the Army and Navy, and only a small fraction of those funds were allocated toward new equipment.[17] The largest and most successful American business firms during this era, such as General Motors and General Electric, were not entirely detached from the military, but they were overwhelmingly concerned with civilian markets. This situation would not change until 1940.

In the early 1920s, prospects for American and British military suppliers were poor; failures and mergers were common. For instance, the U.S. government permitted the Navy's second-leading supplier of submarines, the Lake Torpedo Boat Co., to fail.[18] Meanwhile, the largest World War I contractors prospered in the 1920s only by moving away from military production. Du Pont, which had already aggressively diversified during the war, was so displeased by the

lack of Army orders in the early 1920s that it threatened to exit the business of manufacturing smokeless powder.[19] Bethlehem Steel, which had reaped large profits during World War I as the nation's leading shipbuilder, earned its profits in the 1920s from steel, not ships.[20]

Certainly, American businessmen and military authorities cooperated actively during the 1920s and 1930s. For instance, military officers and manufacturers founded the American Ordnance Association in 1919. The War Department created the Office of the Assistant Secretary of War in 1920 as its center for procurement policy and industrial mobilization planning. This office enjoyed friendly relations with several industrial and engineering associations, such as the National Association of Manufacturers (NAM). In 1924, the War Department launched its new Army Industrial College (AIC), where military officers studied procurement and industrial mobilization planning. Among their teachers were business executives and Harvard Business School professors.[21]

In the US, the UK, and Sweden, industrial associations succeeded in limiting the growth of state-owned enterprise. In the US, the Aeronautical Chamber of Commerce (ACC), created in 1922, worked to blunt the considerable support that the Naval Aircraft Factory had in Congress and the Navy, and prevented it from becoming a large producer of finished planes.[22] Over the long run, military production in the US and the UK remained in the hands of private firms.[23] A similar dynamic prevailed in the US auto industry. In the early 1930s, the National Automobile Chamber of Commerce helped to derail the Army's efforts to assemble finished trucks at its own depot from commercially procured parts.[24]

However, these examples of industrial influence over military matters during the interwar years need to be put into perspective. While industrial firms had impressive goals in founding the War Department Business Council in 1926, this organization turned out in practice to be anemic and short-lived.[25] Similarly, many leading aircraft manufacturers shunned the ACC. Procurement law in the US promoted a decentralized, hyper-competitive aircraft industry in which profits on military work were elusive.[26] More generally, many American business leaders advocated peace, believing it best for both the nation and the bottom line.[27] After Roosevelt assumed office, many American business leaders, including those at leading munitions suppliers such as Du Pont, opposed the New Deal and the Democratic Party. By 1941, much of the American business community was still reluctant to convert to war work.[28]

In sum, the interwar record of industrial democracies suggests that business associations had some success in gaining trade protection and blocking nationalization. On the other hand, until rearmament started in earnest, military expenditures were low enough to prevent most large-scale rent-seeking and meaningful collusion. More broadly, business had mixed success, at best, in shaping many aspects of procurement policy. As indicated above, one of the constraints on successful rent-seeking was the presence of well-developed procurement organizations that (outside Finland, at least) enjoyed considerable

independence from industry. Among the most important other constraints were more formal procurement standards.

In the interwar period, democracies tended to eschew cost-plus percentage contracts, which critics attacked during and after World War I as breeding inefficiency and profiteering. In the 1920s, armed forces acquired most military goods via fixed-price agreements, often after a stage of formal competitive bidding. However, during the rearmament period of the 1930s, procurement authorities increased their use of no-bid, cost-plus agreements. Procurement authorities often used these contracts when the technologies involved were experimental and the ultimate costs were uncertain. While cost-plus contracts reduced the risk of failure or cost overruns for firms, they also increased the probability of rent seeking, cheating, and corruption.[29] Governments sought to minimize these problems through various efforts, such as explicit caps on profits.

In the US, most military procurement during this period used the traditional peacetime method of competitive bidding. Since the 19th century, US procurement law had required advertising and awards to the "lowest responsible bidder."[30] During the interwar years, the vast majority of Army and Navy orders came as the result of invitations to bid, rather than direct price negotiations with designated suppliers.[31] However, in the wake of the Air Corps Act of 1926, the Army used negotiated contracts significantly. Following the Educational Orders Act of 1938, the military also increased its use of noncompetitive orders.[32] Overall, however, the interwar years stand in sharp contrast to World War II. Between 1940 and early 1942, negotiated fixed-price and cost-plus-fixed-fee contracts replaced competitive bidding almost completely.[33]

Other countries outside the US used cost-plus contracts less widely by the opening of World War II. One likely reason was that, after several years of serious rearmament, procurement had become more mature. In the early 1930s, British procurement officials were still using competitive-bid methods to buy airplanes. In the late 1930s, in contrast to the US, British aircraft producers agreed to fill orders without cost-plus contracts, at least after the early stages of production.[34] This method was similar to practices in Germany, which moved in the direction of fixed-price contracts for aircraft in 1937.[35]

Contract standards were one way of regulating profits and prices. Profit control was of great concern during the interwar period to national publics and government administrators. In 1938, 90 percent of the British public favored greater legal controls on arms industry profits.[36] These controls would come soon, in the form of a robust wartime excess-profits tax. Even before 1939, however, the British government was starting to develop strong profit-control standards. By 1936, the British Treasury, to the consternation of the business community, insisted that regulators focus on profits as percentage of invested capital, instead of on turnover.[37] This proved to be an important institutional difference between the UK and the US, where a greater focus on turnover tended to allow higher rates of profits, not only in World War II but well into the Cold War era.[38] This difference was part of a more general divergence in expectations

of allowable profit in the two nations, with the British standard being somewhat lower. In 1939, for instance, the British Air Ministry proposed a maximum rate of allowed profit on turnover at 5 percent — a rate that industry denounced as far too low. At that time in the US, the prevailing law covering the procurement of aircraft and navy vessels, the Vinson-Trammell Act of 1934, capped profits at 10 percent of the contract price.[39]

In Sweden and Finland, where protection of domestic industry was more of a priority, profit controls were less important. During the 1920s, Sweden limited potential profits indirectly, through major cuts in defense spending. When it began to rearm in the mid-1930s, Sweden was more concerned with modernizing equipment than with profit control.[40] Finland held formal competitions for contracts, but in many cases predetermined the outcomes. Finland favored a small number of domestic producers, permitting cost overruns to be common. Like the UK and the US, the Nordic countries endeavored after World War I to avoid cost plus contracts, but once rearmament began, both governments modified this policy.[41]

Many observers often overlook the role of long-standing or newly created public enterprises for the manufacture of armaments as another important constraint on the ability of private firms to secure profitable military contracts. Public sources of production were not only significant in the Soviet Union and in France under the Popular Front in 1936-1937.[42] Britain and the US also maintained major public arsenals that were a major factor in interwar procurement practices and that would remain important during World War II. British and American procurement policies may actually have been less committed to private enterprise than those of Nazi Germany. Rather than adopting much more statist practices, Germany in fact often pursued privatization.[43]

Although Britain, via its giant Ministry of Munitions, created a much larger network of public arms factories during World War I, the British and American approaches to military procurement and military-industrial relations had much in common. Both nations practiced mixed military economies combining government-owned, government-operated (GOGO) manufacturing facilities and private contractors.[44] Although the UK disbanded the Ministry of Munitions in 1921, the UK and the US maintained in the interwar years mixed military economies in which military authorities took the lead in procurement and mobilization planning.[45] The American and British armies and the US Navy relied heavily on GOGO facilities for their peacetime needs.

In both nations, postwar retrenchment, pacifism, and the understanding that public arsenals could handle the supply of many varieties of munitions discouraged placing significant orders with contractors.[46] Throughout the period, the threat of profiteering and cozy military-industrial relations gravely concerned the public, and many called for the abolition of for-profit armaments manufacture. In 1921, a League of Nations commission had declared that "the manufacture by private enterprise of munitions and implements of war is open to grave objections."[47] In the early 1930s, the Nye Committee in the U.S. Senate,

conducting a major investigation of the arms industry, concluded that major British and American military contractors were guilty of collusion. The Nye Committee report therefore called for a government monopoly on munitions production. This report created a sensation in Britain, where organizations representing more than two million people called for an end to the private arms industry.[48]

In the US, the White House and Congress ignored these calls for full nationalization. In Britain, in 1936, a special Royal Commission on arms manufacture considered and rejected the demands. Nevertheless, the calls for an end to the private arms industry made a deep impression on government officials and businessmen. For instance, the record of negotiations with the British Air Ministry in 1936 over a framework for devising contracts for planes shows that the Society of British Aircraft Constructors (SBAC) was concerned that if it drove too hard a bargain, a political backlash could occur that might lead to nationalization.[49]

Public manufacture was not just a specter that might influence contractors, but a real source of supply. Indeed, during the interwar years, the Royal Ordnance Factories (ROFs) handled most British army demands for armaments. For instance, the largest of these GOGO establishments, the Woolwich Arsenal, employed on average approximately seven thousand people during the interwar years, making it the second-largest single employer of armaments workers, behind Vickers-Armstrong. Public manufacture was important, also, in the field of naval vessels. Although Britain had long depended primarily on private firms for the construction of new ships, its Royal Dockyards (GOGO facilities) launched nineteen new cruisers and handled a great deal of major refitting work between 1920 and 1940.[50]

Public facilities were also important on the other side of the Atlantic. Despite the reputation of the US as a bastion of free-market capitalism, the American military economy in the interwar period was never highly privatized, nor deregulated. In some areas, such as the peacetime near-monopoly maintained by the Army's Springfield (Massachusetts) Armory over the manufacture of rifles, there was little left over for the private sector. More commonly, the U.S. military, Congress, and the White House cultivated a mixed public-private procurement system. The War Department owned a smokeless powder facility at its Picatinny Arsenal in New Jersey, but to maintain some private manufacturing capacity, it placed small orders with Du Pont and other firms.[51] The Navy operated a network of shipyards, but when it had available funds, it also spread orders among private firms. The Vinson-Trammell Act of 1934, which marked the beginnings of a naval expansion, required that half of vessels be built in U.S. Navy Yards (i.e., in GOGO facilities).[52] Of U.S. combatant vessels started during the 1930s, 45 of 90 destroyers (50 percent) were built in private yards, as were 12 of 21 cruisers (57 percent) and 21 of 37 submarines (57 percent).[53]

During this period, US private firms often found themselves on the losing end of a competition with public facilities, even after considerable lobbying

efforts. For instance, in the early 1920s, the Navy turned its Portsmouth Naval Shipyard into a submarine design and production facility that rivaled the Electric Boat Co., the leading contractor in the field. The Navy selected Portsmouth to make all four of the submarines it bought between 1925 and 1931. The distribution of orders between Electric Boat and Portsmouth became more even in the 1930s, but at the end of the interwar period, the Navy had much more knowledge and control of production of submarines than at the beginning.[54] The Navy yards were also a thorn in the side of leading contractors making surface vessels, such as battleships.[55]

While the US and UK mostly maintained long-standing GOGO plants through the interwar years, Finland established several new ones, at high cost. The first of these Finnish GOGO establishments was the State Gunpowder Factory, which the Diet created in 1922. The Factory commenced production at Vihtavuori in 1926.[56] Also in the early 1920s, the Ministry of Defense and Social Democrats in the Diet established a GOGO cartridge factory to replace the foundering *Oy Suomen Ampumatehdas Ab* (SAT), a private firm established in 1918 that was experiencing technical and financial difficulties. A new GOGO operation in Lapua began to produce cartridges in 1924.[57] In 1925, the Diet funded a State Rifle Factory to produce light machine guns designed by the Finnish gunsmith A.J. Lahti. In 1938, the State Cannon Factory finally started its production in Jyväskylä, marking the last of the government's interwar military production efforts during the rearmament phase.[58] These factories, along with other business costs, strained the Finnish military establishment: factories cost 881 million FIM in 1932-1939, accounting for over 25 percent of the capital military expenditures. After the GOGO plants were built, the Finnish military concentrated most of its acquisitions in these facilities.[59]

Whereas Social Democrats in Finland promoted state-owned armaments production, their counterparts in Sweden oversaw a different military economy, in which private production, albeit heavily supported by the state, remained central. For instance, during rearmament in the 1930s, the Swedish government helped to establish *Svenska Aeroplanaktiebolaget* (SAAB) as a domestic aircraft monopoly.[60] Taken together with developments in other industrial democracies during the same period, the Swedish arrangements suggest the complexity of the relationship between the military economy and the broader political economy during this era. More "socialist" governments did not necessarily preside over more nationalized armaments industries, just as they would not in Britain during the Cold War.[61]

Starting in the second half of the 1930s, the democracies' approaches to the make-or-buy question shifted considerably, with important implications for the economics of World War II. Military production increasingly took place in government-financed and owned, but contractor-operated (GOCO) facilities. The arrangement was not new: Britain had created dozens of GOCO "National Factories" during World War I. Nor did it prevent the expansion during World War II of important GOGO facilities, such as the Royal Ordnance Factories

in Britain and the U.S. Navy Yards. But GOCO plants would become an even more important source of munitions during World War II, when the US alone invested $18.5 billion in war plant, most of it under GOCO arrangements (Britain invested £1 billion, or approximately $4 billion). In 1945, thanks to the flood of investment in GOCO plants, the US government owned a quarter of all manufacturing assets in the country.[62]

The first big steps toward creating new large scale GOCO capacity for World War II in the Allied countries came with the British launch of the "shadow factory" scheme in 1936. The first shadow factories were government-financed and government-owned plants designed to be run by automobile manufacturers, who would manage the production of aircraft engines.[63] By the middle of World War II, comparable GOCO plants in the UK and US (which started building them in 1940) accounted for a huge fraction of the production of many other essential materials and munitions, including aluminum, synthetic rubber, ammunition, tanks, and bombers.

Critics of the US industrial mobilization for World War II have characterized GOCO arrangements, along with cost-plus-fixed fee contracts, as overwhelmingly advantageous to large industrial corporations, which received guaranteed profits at zero risk.[64] The accuracy of this assessment depends, however, on the details of lease and fee arrangements and the opportunity costs incurred by GOCO operators. Furthermore, the rise of GOCO arrangements in the UK and US happened well ahead of those nations' entries into the war and the concomitant transition into all-out industrial mobilization and full employment. As with so many other elements of war economy, governments laid the groundwork well ahead of the first shots fired.

In conclusion, our analysis suggests that we should be cautious in ascribing great causal power to rent-seeking and collusion during the years between the World Wars. Whereas one might assume, based on economic theory and literature on the so-called military-industrial complexes, that armaments industries and individual firms would have enjoyed high profits during this period, these are hard to find in the historical record. In some cases, the powerful limiting influence on arms suppliers' market power and profits exerted by procurement law and direct competition from public enterprise is evident. In others, however, the institutional environment allowed for rent seeking and collusion, and subsequently some of the armaments firms benefited financially. However, their actions have to be understood in the broader environment of political and budgetary processes, institutional changes, and the demand-side impact of the rearmament surge in the 1930s. To a large extent, democracies succeeded in preventing the sort of profiteering that so worried the public during these years. Democracies succeeded not only by spending little (until rearmament), but by nurturing a variety of institutions that minimized bad behavior. These institutions included procurement bureaucracies that were at least partially independent of business interests, the use of GOGO facilities to fulfill a large fraction of peacetime military orders, and carefully crafted

contracting policies, including explicit caps on profits in armaments contracts. Such methods allowed the interwar industrial democracies to keep the "merchants of death" accusation at bay, for the most part, up to the beginning of World War II. How well they have done so since then, and the extent to which the interwar institutions continued to be important, are different questions that deserve further investigation.

NOTES

1. For example, Barry Posen, *The Sources of Military Doctrine: France, Britain, and Germany between the World Wars* (Ithaca: Cornell University Press, 1984); Williamson Murray and Alan R. Millet, *Military Innovation in the Interwar Period* (Cambridge; New York: Cambridge University Press, 1996); Elizabeth Kier, *Imagining War: French and British Military Doctrine between the Wars* (Princeton: Princeton University Press, 1997); David E. Johnson, *Fast Tanks and Heavy Bombers: Innovation in the U.S. Army, 1917-1945* (Ithaca: Cornell University Press, 1998). More recent studies devoting more attention to government-business relations, production, and procurement, include Talbot C. Imlay, *Facing the Second World War: Strategy, Politics, and Economics in Britain and France, 1938-1940* (Oxford; New York: Oxford University Press, 2003); Mary R. Habeck, *Storm of Steel: The Development of Armor Doctrine in Germany and the Soviet Union, 1919-1939* (Ithaca: Cornell University Press, 2003).
2. See Jari Eloranta, "From the Great Illusion to the Great War: Military Spending Behaviour of the Great Powers, 1870-1913," *European Review of Economic History* 2, August 2007; 255-283. Classic studies of this type are Alan Milward's works on the European war economies; see, for example, Alan S. Milward, *War, Economy and Society 1939-1945* (London: Allen Lane, 1977). On more recent scholarship, see Mark Harrison, ed., *Economics of World War II. Six Great Powers in International Comparison* (Cambridge: Cambridge University Press, 1998).
3. See especially Robert Higgs, "The Cold War Economy. Opportunity Costs, Ideology, and the Politics of Crisis," *Explorations in Economic History* 31, no. 3 (1994), 283-312.
4. Jari Eloranta, "External Security by Domestic Choices: Military Spending as an Impure Public Good among Eleven European States, 1920-1938" (Ph.D. diss., European University Institute, 2002).
5. For more details, see Douglass Cecil North, *Institutions, Institutional Change, and Economic Performance* (Cambridge; New York: Cambridge University Press, 1990); Jari Eloranta, "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" (Licentiate Thesis, University of Jyväskylä, 1998).
6. H.C. Engelbrecht and Frank C. Hanighen, *Merchants of Death: A Study of the International Armament Industry* (New York: Dodd, Mead & Co., 1934), 263.
7. Stuart D. Brandes, *Warhogs: A History of War Profits in America* (Lexington: University Press of Kentucky, 1997).

8. David Edgerton, *Warfare State: Britain, 1920-1970* (New York: Cambridge University Press, 2006), 15-58.
9. Jari Eloranta, "Rent Seeking and Collusion in the Military Allocation Decisions of Finland, Sweden, and the UK, 1920-38," *Economic History Review* 62, no. 1 (2009), 23-44.
10. G.A.H. Gordon, *British Seapower and Procurement between the Wars: A Reappraisal of Rearmament* (Annapolis, Md.: Naval Institute Press, 1988), 78-91.
11. Sebastian Ritchie, "The Price of Air Power: Technological Change, Industrial Policy, and Military Aircraft Contracts in the Era of British Rearmament, 1935-39," *Business History Review* 71, no. 1 (1997), 7-11; Jari Eloranta, "European States in the International Arms Trade, 1920-1937: The Impact of External Threats, Market Forces, and Domestic Constraints," *Scandinavian Economic History Review* 50, no. 1 (2002), 44-67; G.C. Peden, *Arms, Economics and British Strategy: From Dreadnoughts to Hydrogen Bombs* (New York: Cambridge University Press, 2007), 139.
12. Gordon, *British Seapower*, 19-47, 61-64.
13. Eloranta, "Different Needs, Different Solutions;" Eloranta, "External Security by Domestic Choices"; Robert Paul Shay, *British Rearmament in the Thirties: Politics and Profits* (Princeton: Princeton University Press, 1977), 94-97.
14. Ibid.
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