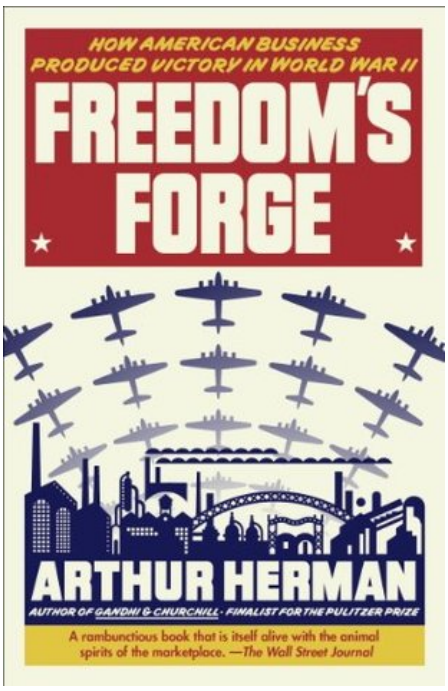


# Freedom's Forge: How American Business Produced Victory in World War II

*Arthur Herman*

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**Freedom's Forge: How American Business Produced Victory in World War II** Arthur Herman
**SELECTED BY *THE ECONOMIST* AS ONE OF THE BEST BOOKS OF THE YEAR**

Remarkable as it may seem today, there once was a time when the president of the United States could pick up the phone and ask the president of General Motors to resign his position and take the reins of a great national enterprise. And the CEO would oblige, no questions asked, because it was his patriotic duty.

In *Freedom's Forge,* bestselling author Arthur Herman takes us back to that time, revealing how two extraordinary American businessmen—automobile magnate William Knudsen and shipbuilder Henry J. Kaiser—helped corral, cajole, and inspire business leaders across the country to mobilize the "arsenal of democracy" that propelled the Allies to victory in World War II.

"Knudsen? I want to see you in Washington. I want you to work on some production matters." With those words, President Franklin D. Roosevelt enlisted "Big Bill" Knudsen, a Danish immigrant who had risen through the ranks of the auto industry to become president of General Motors, to drop his plans for market domination and join the U.S. Army. Commissioned a lieutenant general, Knudsen assembled a crack team of industrial innovators, persuading them one by one to leave their lucrative private sector positions and join him in Washington, D.C. Dubbed the "dollar-a-year men," these dedicated patriots quickly took charge of America's moribund war production effort.

Henry J. Kaiser was a maverick California industrialist famed for his innovative business techniques and his can-do management style. He, too, joined the cause. His Liberty ships became World War II icons—and the Kaiser name became so admired that FDR briefly considered making him his vice president in 1944. Together, Knudsen and Kaiser created a wartime production behemoth. Drafting top talent from companies like Chrysler, Republic Steel, Boeing, Lockheed, GE, and Frigidaire, they turned auto plants into aircraft factories and civilian assembly lines into fountains of munitions, giving Americans fighting in Europe and Asia the tools they needed to defeat the Axis. In four short years they transformed America's army from a hollow shell into a truly global force, laying the foundations for a new industrial America—and for the country's rise as an economic as well as military superpower.

Featuring behind-the-scenes portraits of FDR, George Marshall, Henry Stimson, Harry Hopkins, Jimmy Doolittle, and Curtis LeMay, as well as scores of largely forgotten heroes and heroines of the wartime industrial effort, *Freedom's Forge* is the American story writ large. It vividly re-creates American industry's finest hour, when the nation's business elites put aside their pursuit of profits and set about saving the world.

**Praise for *Freedom's Forge***

"A rambunctious book that is itself alive with the animal spirits of the marketplace."—*The Wall Street Journal*

"A rarely told industrial saga, rich with particulars of the growing pains and eventual triumphs of American industry . . . Arthur Herman has set out to right an injustice: the loss, down history's memory hole, of the epic achievements of American business in helping the United States and its allies win World War II."—*The*

*New York Times Book Review*

“Magnificent . . .

## Freedom's Forge: How American Business Produced Victory in World War II Details

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# From Reader Review Freedom's Forge: How American Business Produced Victory in World War II for online ebook

### Michael Elkon says

When I was in tenth grade, I was giddy at the prospect of finally getting to cover WWII in a class. The subject had been of interest for me since I was eight years old and my Dad took me on "45-minute walks" to tell me the story of the war. By age ten, I was reading books about it. So you might imagine my disappointment when in 5th grade and then again in 7th, we had "American History" and never got to the war. In fact, my 7th grade teacher, Mrs. Fluker (RIP), got to the Civil War in the final week of school and then decided to give us a lecture on the early history of photography, which we dubbed "Daguerrotyping with Donnis."

So when I got to 10th grade AP American History, I was really excited (as only a history nerd can) about finally getting to learn about WWII, not that I thought I needed to know anything else about it. Our first book for the class was "A People's History of the United States" by Howard Zinn. I was thrilled to get to the chapter on WWII, the prospect of finally getting to cover my favorite academic subject, and was mortified to spend the next hour of my life reading about strikes. No battles, no campaigns, no invasions, just discord between virtuous workers and exploitative bosses.

I mention this background because Freedom's Forge is the total inverse of Zinn's chapter on WW2. The people who won WWII, according to Arthur Herman, are not MacArthur, Nimitz, Patton, and and Eisenhower, but William Knudsen and Henry Kaiser. These two, along with numerous other executives, led an awe-inspiring effort to build an incredible number of planes, ships, tanks, and other war materials. They did so without a central planner in Washington commanding businesses to make certain products on certain schedules. Instead, Herman argues that they simply facilitated American business performing the task itself, with certain large businesses deciding to build equipment requested by the military. In essence, the government gave the businesses a task and paid the bills, leaving the titans of industry to figure out the best way to build the vast quantities of material that was used by the US, UK, and USSR.

Causing Zinn to turn over in his grave, Herman is ruthlessly critical of organized labor, portraying them as enemies of production. At numerous turns, Herman states that unions went on strike and thereby jeopardized the war effort. He states that a number of the unions were led by Communist sympathizers who did not want production to be too great when the USSR and Nazis were allies, without examining that the implication would be that these agents would then want to maximize production as soon as the USSR was invaded and American supplies (especially trucks and radios) became critical to the Soviet war effort. He also argues that a number of the strikes were squabbles between unions, as that is less sympathetic than the notion that workers wanted better conditions and more pay. Herman cites a line from Adam Smith that bakers and butchers don't make food for altruistic reasons, but rather because of their desire to make money. He uses that line to justify businesses making profits during the war, but the same justification could be used to justify workers wanted better wages. He also cites an incredible statistic that twenty times more men and women were killed or injured in 1942-43 in industrial accidents than were killed or injured in combat. That stat is not especially complimentary of the factory operators whom Herman is lionizing. It's also a great advertisement for OSHA and the tort system.

The description of how various businesses overcame challenges to hit and exceed production targets is fascinating. Two instances stand out. The first is Kaiser's construction of Liberty Ships, which Kaiser achieved by creating a standard, simple design and then letting his Richmond (CA) and Portland shipyards

compete to see who could improve the manufacturing process the fastest, with the former winning the competition by making a Liberty Ship in four days and change. Herman doesn't ignore the fact that the Liberty Ships went through a period where they were splitting apart at the seams (lesson from the book: welding is better than using rivets, but you have to do the welding right or else bad shit happens), but he notes that Kaiser's team eventually solved the problem and many of the Liberty Ships were still on the seas two decades later.

The second is the production of the B-29. Herman covers the creation of the famous B-24 plant at Willow Run (near Ypsilanti, which became known as Ypsitucky because of the number of Kentuckians who moved there to get jobs), and then was improved upon at Wichita with a production process for the B-29, which was a far more advanced bomber than the B-17 or B-24. (B-29s were also made by Bell in Marietta, a factory that was initially a failure and then turned out to be one of the best of the war.) It was bigger, faster, had a bigger bomb load (General Groves asked for that specifically from General Arnold because he was aware of the special weapon that was being produced in New Mexico and would need the capacity of the B-29 for delivery), was pressurized so it could fly higher, and had an automated gunnery system. Because of the technical issues involved in creating a plane of such dimensions, the B-29 had engine issues, i.e. they overheated constantly, especially when deployed to hot climates like, say, India, Burma, China, and the South Pacific. In peacetime, these technical issues would have taken years to solve, but with the pressure of needing to win a war on two fronts, they were solved quickly.

The B-29 leads to two additional items of interest. First, the plans were made before Pearl Harbor. It's to FDR's credit that he saw WW2 coming years in advance, even when American public opinion was strongly opposed to getting involved. The task of ramping up for production would have been significantly tougher with an isolationist president. Second, Herman describes the process by which General Lemay figured out his strategy for razing Japan: he needed incendiaries rather than normal explosives and he needed his B-29s to fly lower. Unusually for an Ohio State graduate, he was exactly right. Herman ties Lemay to the story of the manufacturing process by noting that Kaiser's business had stumbled upon "goop," made from magnesium and useful in cleaning, which turned out to be highly flammable and quite adhesive. A few tests later, we had a highly effective incendiary weapon. Herman does not refer to it as napalm, mainly because proper napalm was invented by DuPont using petroleum rather than magnesium and turned out to be a more effective device in burning Japan. That's outside of his narrative.

Herman also omits some details in his effort to lionize his subjects. He lovingly describes the process by which the M-3 Grant was developed and produced without mentioning the fact that it was a terrible design. He also described how effective the P-51 Mustang was with the Merlin engine, but although Herman doesn't shy away from the fact that the Merlin was a British design, he omits the fact that it was the British who figured out that pairing the engine with the P-51 created an exceptional fighter.

My more fundamental criticism of Herman is that he is jingoistic in describing American production successes being unique in the war. He concludes that the US stayed away from a planned economy and that caused the US to produce more than the other combatants combined. He omits the fact that the US was bigger than all of the other participants and, crucially, was untouched during the war, which meant no bombs falling on factories or invading forces. It's pointless to compare the feats of American and Soviet industry when the Soviets had to relocate a large number of their factories across the Urals because of the German invasion. Herman concludes that American business won the war, but he never attempts to grapple with the advantages that it had over the other combatants.

Moreover, Herman cites Richard Overy's "Why the Allies Won" in his acknowledgments, but that book paints a picture very different than Herman's dismissal of any non-Americans. Overy states that "the Soviet

economy outproduced the German economy from a resource base a good deal smaller and with a workforce far less skilled," which he concludes is a "remarkable achievement" that might be the result of the Soviets' centrally planned economy and repressive state. In the end, Overy notes the common factors in the American and Soviet successes in producing, which contradicts Herman's point-of-view.

Herman's POV runs away with him in the conclusion, when he claims that New Dealers tried to take credit for war production ending the Depression and that the economic boom after the war vindicated Keynes. Herman disagrees with this point, but doesn't explain why. In fact, the book stands as a vindication of Keynes. The US economy had substantial excess capacity, which the government filled by placing a massive amount of orders for military goods. As a result, unemployment vanished and the economy boomed. When the war ended, industry converted to peacetime production and the pent-up demand sustained the boom. This is exactly what Keynes would prescribe: the government stimulating demand during a downturn by spending. The fact that the orders were placed with private businesses as opposed to the government employing workers itself is immaterial. Add in the fact that the massive expansion during the war took place in an environment of high top tax rates (note that, supply-siders) and Herman's book supports Keynesianism, not the reverse.

Overall, this is an enjoyable read. I plowed through it in a little over a week. The stories of how businesses ramped up their production are interesting. One should just take a lot of what Herman says about unions, government, and other countries with a grain of salt. He's hardly impartial on these subjects. Just as Zinn and his ilk have to be read with the understanding that they are advocates, the same is true with Herman.

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### Mal Warwick says

The mind-boggling story of how America rearmed for World War II

Since I was born six months before the U.S. entry into World War II, I grew up familiar with a long list of names — little-heard now, more than half a century later — that were associated with the U.S. role in the war that seized hold of Planet Earth for a half-dozen years and set America’s course as a superpower for the balance of the 20th Century. Jimmy Doolittle, Henry Kaiser, George Marshall, Hap Arnold, Curtis LeMay, Paul Tibbetts, and a host of others — every one of whom figures in the epic story so skillfully told in Freedom’s Forge.

As the book’s subtitle suggests, Freedom’s Forge focuses on the role that America’s business community, and especially Big Business, played in the monumental effort that resulted in the unconditional surrender of Germany and Japan just months apart in 1945. Two extraordinary men — William S. Knudsen and Henry Kaiser — are the stars of this story, business impresarios who marshaled the stupendous numbers of men and women and the unprecedented mountains of raw materials that supplied the U.S. and its Allies with the weapons of war.

Nothing since — not the Apollo moon landings, not the war in Vietnam, not even America’s protracted wars in Afghanistan and the Middle East — has come even remotely close to the magnitude of World War II. Over the five-year period from July 1940, when the U.S. began to rearm, until August 1945, when Japan surrendered, “America’s shipyards had launched 141 aircraft carriers, eight battleships, 807 cruisers, destroyers, and destroyer escorts, 203 submarines, and . . . almost 52 million tons of merchant shipping. Its factories turned out 88,410 tanks and self-propelled guns, 257,000 artillery pieces, 2.4 million trucks, 2.6 million machine guns — and 41 billion rounds of ammunition. As for aircraft, the United States had

produced 324,750, averaging 170 a day since 1942."

Can the human mind today even comprehend what must have been involved in manufacturing 300,000 airplanes and 100 aircraft carriers?

This staggering output of weapons came as a result of a profound transformation of the American economy, engineered in significant part by Bill Knudsen and Henry Kaiser. The two could hardly have been more different, and they didn't like each other. Knudsen was a modest and unassuming Danish immigrant who worked closely with Henry Ford on the Model T and later built and ran General Motors into the world's largest industrial corporation, dwarfing Ford's output. Kaiser, a West Coast construction magnate who was the son of German immigrants, was flashy, outgoing, and immoderately persuasive — a model of self-promotion. Together with a host of others in and out of government, these two men led the conversion of the U.S. economy to unparalleled heights as the "arsenal of freedom." Nonetheless, "[i]n 1945 Americans ate more meat, bought more shoes and gasoline, and used more electricity than they had before Hitler invaded France."

Though I thoroughly enjoyed reading Freedom's Forge, there was one discordant note. Author Arthur Herman, a free-market conservative who wrote this book as a visiting scholar at the right-wing American Enterprise Institute, advanced a political message throughout. That message could be summed up as "FDR, the New Deal, labor unions — bad. Business, businessmen, military leaders — good." He could hardly have been more blatant. But the man writes well, and he did a stellar job of telling this unimaginably complex story between the covers of a single volume.

In the conclusion, Herman quotes Josef Stalin when he first met at Tehran with Roosevelt and Churchill in 1943: he "raised his glass in a toast 'to American production, without which this war would have been lost.'" There could be no higher praise for capitalism, coming as it did from the dictator of the Communist Soviet Union.

From www.malwarwickonbooks.com

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### Tom says

I enjoyed this book. The author brought to life the scale-up of American manufacturing during the years before WWII until then end of the war.

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### Adam Yoshida says

In Freedom's Forge, Arthur Herman does something that I didn't think that anyone could: he teaches something that (for me, at least) is genuinely new, relevant, and interesting about the Second World War.

This book follows a handful of American industrialists - from Henry Kaiser, who led the construction of the Liberty Ships that carried vital war materiel to to Bill Knudsen, a Danish immigrant and former General Motors executive who led the industrial mobilization effort in the opening years of the war and went on to serve as a Lieutenant General in the Army - as they turn the great American machine into Franklin Roosevelt's "Arsenal of Democracy."

Freedom's Forge reminds me greatly of another book that I thoroughly enjoyed in recent years, Amity Shales "The Forgotten Man" in that it provides a convincing revisionist history of an era whose story has too often been told entirely through the words of historians sympathetic to Franklin Roosevelt, the Democratic Party, and the New Deal. Rather than an example of the virtues of centralized control, Herman argues, the Second World War provides an example of the creative dynamism of the capitalist system. The industrial might that allowed America to win the war and then feed and clothe the world in the years after didn't come from the central planners in Washington but, instead, as a result of the self-interested and largely-voluntary cooperation of the titans of American business.

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### Aminah Yaquin says

This book is startling in its evocation of the recognition of executive authority as measured not by status and money, but by the randomness of genius as it is developed in individuals whose talents and prodigious skills are honed by doing, and their ranks in a company earned, not purchased.

Vestiges of the excitement of shared collective enterprise and pride in work, were still extant when I was young,and made even factory work very appealing...something Total Quality Management approached, but has since fallen into demise as the production of goods has given way in our country to the cottage industries of such destructive arenas for labor as telephone debt collecting and our ubiquitous, infernal prisons.

Here is a book that celebrates, unashamedly and deservedly, the joys and accomplishments of business in stabilizing society, distributing wealth, and rewarding top management not with anarchic hedonistic perks like secret sex clubs and more paper money than most small nations ever see in their existences, but rather with the power to actualize accomplishment at every level of their business purview, big and small.

How this made it possible for USA to shore up Britain's defenses,and defeat Hitler is enthralling reading so far. This book was Pulitzer nominated. Herman writes beautifully and with an unbowed spirit of confidence in true entrepreneurship.

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### Ben says

I'm conflicted by this book. One one hand, it's a great examination of the American business machine in WWII - little acknowledged yet obviously a vital component to our success in the war, not to mention the postwar boom. On the other hand, it's quite slanted and partisan. The mustache-twirling villains are President Roosevelt, his New Deal Administration, and the obstructionist, utterly selfish labor unions (how dare they strike! we've got a war to win!). The saintly, self-sacrificing heroes are the titans of industry, CEOs of auto, steel, and concrete companies who know best and are happy to volunteer their time for a dollar a day if only the government got out of their way. The book reminds me of "A Burns for All Seasons", the film Monty Burns commissioned for the Springfield Film Festival.

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### Amber says

I finish the vast majority of books I start (especially non-fiction), and the ones I don't, it's usually because the topic doesn't interest me. In this case, however, I find the topic--the role of American business in World War

II--extremely interesting; I just couldn't handle the slanted way it was presented. And I have never before posted a review for a book I didn't finish, but in this case felt like I had a good enough understanding of its flaws to make a reasonable comment.

The key businessmen are lionized, with little acknowledgement of others who may have contributed, the role of luck, etc., and government (especially Democrats) are continuously denigrated. After a while, this really grated, even for someone with pretty libertarian views. For example, he gives William Knudsen complete credit for both the continuous assembly line and the "flexible mass production" process. Or paragraphs like "If the country was going to make itself seriously ready for war, neither the politicians nor hte generals nor the admiral were willing to take the lead. American business and industry would have to figure it out on their own."

As well, the book is poorly copy-edited, which I have little patience for. ("In 1936 Sloan's GM was selling more cars than it had before the Depression. In 1937 it was selling more.") And frankly I think it's rather sexist for any book published in 2012 to use the term "coed."

Anyway, it's too bad--I think there's an interesting story to be told here, it just isn't compelling to read when it's done in such an over-the-top way--it leaves you wondering what's really true, and what has been embellished to fit the author's pre-conceived beliefs. I suppose it's my own fault for not looking into his position a bit more; he works for the American Enterprise Institute.

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### Shane Hawk says

Arthur Herman covered thousands of pages of research into less than 400 pages with so much detail your head will spin. This is a great read for anyone interested in how American businesses shifted from the consumer economy to wartime production during WWII. Truly astounding.

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### Clyde says

A very good history of the incredible mobilization of American industrial might during WW2. Very well researched and quite detailed, this is the true story. I hadn't realized how unprepared the USA was for war in 1939. The amazing thing is how quickly things were turned around, mostly through the efforts of a few American industrial leaders. Some of the heroes of the great effort are well known. However, others have drifted into obscurity while some who were really not so important have been made to seem so by various interest groups. Also, the can-do, get-it-done attitude of Americans of the time from all levels of society was a big advantage.
The USA avoided the pitfalls of over-centralization that troubled German and Japanese industry during the war. However, that had a down side as it generated the mighty military-industrial complex that plagues us even to today.
Good book, well written.

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### ZaibatsuRandom says

Spectacular book. Besides the fascinating specifics of history the book makes it crystal clear how the free

market was the foundation of winning WWII. Highly recommended!

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### Marks54 says

This is a history of the effort to mobilize war production in the US in WWII - a biography of the "arsenal of democracy". This is a massive story that is essential in understanding the link between the US during the great depression and the post-war economic boom. The book is organized around the wartime biographies of two men - William Knudsen of General Motors and Henry Kaiser, of Kaiser Industries Fame. Both men played key roles in war mobilization - Knudsen by laying the initial foundations for the involvement of large industrial firms in war mobilization and Kaiser through his development of Liberty Ships and numerous other project in shipbuilding and infrastructure development. These men and their colleagues were amazing people who did wonderful achievements that materially contributed to winning the war. The story is an important one that is generally told in bits and pieces in other industries. The book is well written and moves well.

Apart from the large number of interesting bits of history throughout the book, the story itself is well told and shows much thought. For example, the two lead characters, Kaiser and Knudsen, distinguished themselves in different types of industrial production. Knudsen was the star of GM who led his Chevy division past Ford. He was the master of industrial mass production and this figured greatly in the great wartime factors to produce tanks, trucks, and bombers, to name only a few products. Kaiser, on the other hand, was the master of project work. He initially gained his fame as the leader of the six company coalition behind the Hoover Dam and he was essential at developing US shipyeards to produce merchant ships and even new navy warships (such as his mini aircraft carrier). If one follows business history, this distinction between mass production and projects is fundamental and it is reasonable to look at industrial accomplishments during WWII this way. This climax of the book is -- no surprise -- the combination of the super plane (the B29) and the Atomic Bomb, the super weapon from the Manhattan Project -- that led to Japan's surrender. It is a fitting combination of project work and mass production. The book's discussion of subcontracting networks is also well done and informative.

One annoying aspect of the book is its efforts to cloth the story in the ideological take of war mobilization as the triumph of free market capitalism -- as opposed to the inept bureaucrats of the New Deal and the greedy and unpatriotic strikes of the unions. While the organization and efficiency of the industrial firms contributed hugely to allied success, this was very clearly a monumental exercise of business-government cooperation. While I agree that the price system was important in assuring an efficient result, this was not what we would commonly call free market or entrepreneurial capitalism (except with the subcontractors). Why? First, the prime industries were large and oligopolistic to start with. The major players generally knew each other and could cooperate with each other - which a market observer would call more collusive than competitive. More importantly, the government picked up the risk in this contracts, so the firms got to benefit from government investment and volume while being able to recoup their costs and secure a fixed fee for a profit -- these are the "cost-plus" contracts mentioned early in the story. If the government picks up the investment tab and covers the profit risk, an effort may benefit from a firm's expertise, but this is not the "free market". The Keynesian view that wartime spending was the stimulus plan that finally got the US out of the depression is more on target. A related point on this concerns the unions, which are considered negatively in the book. If firms are getting their profits guaranteed, why fault the unions for trying to do the same? The free market interpretation sounds a bit like an effort at revisionist history. It is not accurate. More importantly, it is not necessary. The story is interesting on its own terms and the ideology detracts from the fundamental value of the book and the author's many strong points.

### Luisa Knight says

I thoroughly enjoyed this read! It was both incredibly fascinating and well written!

If you're interested in economics, history, The New Deal, capitalism, business, production and World War II, you'll most likely enjoy what this book offers. It closely follows the actions and leadership of the two men that essentially took America out of the Great Depression and turned it into the nation which became the world's strongest military power and aide of the War.

Full of astonishing facts (such as: the U.S. was number 18 - just ahead of tiny Holland - in global military power just before World War II and by the middle of the War, it became 1st. Also, production lines got so efficient that a task force put out a Liberty ship in just four days, fifteen hours and twenty-six minutes!) and stories from Roosevelt, Churchill, production line workers, automobile mechanics, welders, sailors, airmen and others, it brings all the details and impressive achievements together in a nice, smooth flow.

It might be a little comprehensive for some, but if you like learning about this era, I'm sure you'll love this book as much as I did!

Cleanliness: nothing to note.

**Like my reviews? I also have hundreds of detailed reports that I offer too. These reports give a complete break-down of everything in the book, so you'll know just how clean it is or isn't. I also have Clean Guides (downloadable PDFs) which enable you to clean up your book before reading it! Visit my website: The Book Radar.

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### Bou says

*In this book, two individuals are followed that - according to the author - helped American industries in becoming the arsenal of democracies. In so doing, they transformed America’s military into the biggest and most powerful in the world. They also laid the foundations for a postwar prosperity that would extend across three decades until the 1970s and fuel the economic growth of the rest of the planet.*

One was William Knudsen, who worked his way up from the shop floor to become president of General Motors. The other was Henry Kaiser, who became America’s most famous shipbuilder and the living symbol of the productive power of the arsenal of democracy with his launching of the Liberty ships.

Knudsen triggered a second industrial revolution based on mass production, one that lowered costs by making more, not fewer, of a product—and one that ruthlessly weeded out the old and obsolete to make way for the new. Apart from that, he created a “flexible mass production”: a manufacturing process that allows for constant modification and change.

Knudsen also had faith in the power of mass production. He knew that in World War I large parts of American industry still had not switched over to the flexible-assembly-line methods that were now common in the automobile industry. If the country was going to make itself seriously ready for war, neither the

politicians nor the generals nor the admirals were willing to take the lead. American business and industry would have to figure it out on their own.

Roosevelt appointed Knudsen as chairman of the National Defense Advisory Commission, where his immediate focus was on how a commission that was entirely advisory, with no powers of its own, was going to proceed. One thing that certainly helped, was that the British flooded the American defence industry with orders, whereas the American army was not.

One other man saw a golden oppurtunity. Meeting Britain's urgent demand would mean gearing up America's merchant shipbuilding capacity to an entirely new level, after being in the doldrums for almost a decade. Henry Kaiser to the rescue. Such was the beginning of what would become the most famous shipyards in the world, producing the most famous merchant ship in the world—the Liberty ship.

The result? America, the isolationist nation still at peace, was fast approaching Nazi Germany in its defense output. In 1942 it would roar past it. merica was poised to produce arms in quantities no one had ever thought possible. The explosive rate of growth Knudsen and his colleagues triggered from mid-1940 to the end of 1941 eased after 1942, although the numbers of planes, ships, tanks, and weapons would continue to explode. It was all due to Knudsen and his team.

When the Allies had won the war in 1945, America's shipyards had launched 141 aircraft carriers, eight battleships, 807 cruisers, destroyers, and destroyer escorts, 203 submarines, and, thanks to Henry Kaiser and his colleagues, almost 52 million tons of merchant shipping. Its factories turned out 88,410 tanks and self-propelled guns, 257,000 artillery pieces, 2.4 million trucks, 2.6 million machine guns—and 41 billion rounds of ammunition. As for aircraft, the United States had produced 324,750, averaging 170 a day since 1942. Yet America had done all this while remaining the least mobilized of the Second World War combatants. The smallest percentage of the male population entered the armed forces. Yet the output of consumer goods was larger every war year than it had been in 1939, despite the restrictions and rationing. In 1945 Americans ate more meat, bought more shoes and gasoline, and used more electricity than they had before Hitler invaded France. The dream of an economy vibrant enough to produce both guns and butter had been realized thanks to American business.

What made America productive wasn't the war or government dictates or a supreme sense of national urgency. It was the miracle of mass production, which, once turned loose, could overcome any obstacle or difficulty.

The book follows Knudsen and Kaiser in their approach, how they overcame important problems such as labour shortages, union problems and ignorant generals and admirals. It gives some interesting insights behind the personalities and policies of the great American mobilization that helped to win the war.

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### Aaron Mattupurath says

It was a good book it talked about how America at the start of the war was in economic hardships and how America went to the Major corporations for assistance and what they had to go trough to please the government.

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### Jared Bryson says

I don’t know how you make industrial production during the 1940s exciting and patriotic, but Arthur Herman does it. He champions the production hero’s of the 1940s who helped produce the economic juggernaut that was the United States. He details the battles between the free market business community and the progressive/labor forces as well. An exceptional, eye-opening book on both business and history. A look at WWII that I’ve never seen before. Exciting.

I could go on and on. If you like business or WWII, this is a book for you.

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