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# The Effectiveness of the Japanese Military Establishment in the Second World War

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### Introduction

Although the Second World War began years earlier for Imperial Japan than it did for the European powers or the United States, the West was dismally ignorant, in civilian as well as military circles, of Japan's military proficiency on the eve of the Pacific War. Partly, this was due to Japan's own siege mentality and exclusionist tradition, evidenced by its strict prewar policy of limiting foreign observation of its armed forces and by its conduct of tight police surveillance of residents and travelers. What might have been seen or read about was further veiled by the difficulty of the Japanese ideographic language and, in the case of the United States, by the Americans' modest investment in personnel assigned to Japan as language officers, attachés, or exchange officers. In the twenty-two years between 1920 and 1941, for example, the US Army assigned seven attachés and forty-two language officers to Tokyo. Only one of the language officers (Rufus Bratton, 1922-6) ever became an attaché in Japan (1933-7). Sidney Mashbir, a language officer in 1922-4, was able to put his skills to good use during and after the Second World War. In overall terms, US military intelligence personnel were very few in number in 1941, and most were engaged in 'human source intelligence.' It has been estimated that 'less than a dozen U.S. Army and Navy intelligence officers were qualified to make a credible estimate of enemy capability based upon what little information did arrive."2

Consequently, the Japanese armed forces were shallowly evaluated; they were underrated at best, despised at worst. For example, Japanese troops –



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characteristically unshaven for days even in peacetime – seemed 'untidy and slovenly,' an impression reinforced by the sight of 'boots much patched and quite unpolished, clothes badly fitting and badly patched, and dirty buttons . . . the very antithesis of tidiness, so far as . . . turnout is concerned.' Only the rare professional could penetrate the surface and perceive that Japanese discipline and devotion were exceptional, and that the Japanese soldier was a first-class fighting man.

On the eve of the Second World War, Western ignorance and contempt spawned a stereotype of the Japanese male that was a model of ethnic condescension, depicting him as a slow-witted, scrawny runt with spectacles and poor, protruding teeth, a wretched shot by day and blind at night. The folklore lingered long. US Marine Corps General Holland M. Smith asserts that the battle of Tarawa, fought in November 1943, some two years after Pearl Harbor, 'taught us more about the character of the enemy than all the textbooks and intelligence reports at staff disposal.'4

The very success of the Japanese at the outset of the Pacific War had caused an initial reversal in evaluation by the Allies; for a while, the Japanese seemed to be 'a kind of mechanical juggernaut.' A second flipflop ensued. General A. A. Vandegrift reveals the exultation that suffused him and his marines after the American victory at the Tenaru on Guadalcanal: '. . . today we had beaten the Jap. The Jap no longer seemed superhuman. The Jap was a physical thing, a soldier in uniform, carrying a rifle and firing machine guns. We stopped this Jap, decimated his ranks.'5

One last feature typified the war in the Pacific and colored the way it was fought by the Allies: feelings of racial contempt and hatred that far exceeded those vented against the Axis in Europe. From a vast literature, the wartime remarks of a US Army Air Corps fighter pilot, Colonel Robert Scott, reveal the depth of emotion felt by foes of the Japanese at the tactical level. 'They're little, warped-brained savages, with an inbred persecution complex,' wrote Scott. In a passage that had to be sanitized in postwar editions of his book, Colonel Scott described his joy at strafing enemy troops or '[blowing] a Jap pilot to hell out of the sky': 'I just laughed in my heart and knew that I had stepped on another black-widow spider or scorpion.'6

At the strategic, comparative level, postwar observations by Air Force General Carl Spaatz provide rare insight into the matter of wartime US attitudes:

we had not the same urge, or the same feeling, as far as bombing Germany is concerned, as we had for the Japs who first attacked at Pearl Harbor . . . We didn't hear any complaints from the American people about mass bombing of Japan; as a matter of fact, I think they felt the more we did the better. That was our feeling toward the Japanese at that time.<sup>7</sup>

General Curtis LeMay explained why the B-29 offensive against Japan was rushed, unwisely and prematurely, from the China-Burma-India theater in 1944: 'our entire Nation howled like a pack of wolves for an attack on the Japanese homeland. The high command yielded [though] nothing was ready.'8

In short, the Allied war against Japan differed markedly from the war in



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other theaters: objectively, in terms of the time frame; subjectively, in terms of the perception of and attitudes toward the enemy, involving a mixture of complacency and preconception, hatred and disdain, underestimation and overestimation, chauvinism and sheer racism. It is against this backdrop that we proceed to assess the military organizational effectiveness of the one Asian power examined in this volume – that of the Japanese military establishment in the Second World War, or, as the Japanese styled it officially, the Greater East Asia War.<sup>9</sup>

# Political Effectiveness

To assess the extent to which the military organization could assure itself of a significant and regular share of the national budget, it is important to note that, in the case of Japan, the country had entered a period of domestic military domination de facto, if not dictatorship de jure, by the year 1941. Invocation of the magic formula of 'operational necessity' stifled public debate. Neither the parliamentary organs (the Imperial Diet) nor the civilian ministers of state (the Prime Minister and the civilian members of the Cabinet) were in a position effectively to control or oversee the activities of a military organization that possessed and prided itself on unique attributes: the right of direct access to the commander-in-chief (the emperor), and the ability to make or break governments by a 'majority of one' in cabinets – that is, by authorizing or withholding approval of the military or naval members of cabinets (ministers of army and navy, always uniformed officers of at least lieutenant general or vice admiral rank in this period).

To all intents, political parties had been suppressed or eliminated as a significant moderating element. The Prime Minister and the Cabinet were barred from considering strategic matters. Asked about the effect of the Diet in military administration, one former War Minister, Field Marshal Hata Shunroku, replied in gist: 'Nil.' For its part, the army brought down the Yonai Cabinet by withdrawing Hata as War Minister.

Within the fiscal framework of the government's general-accounts budget (which Diet committees could address in strictly technical terms), the parameters were essentially those dictated by the overall availability of national funding. In the unlikely event that the Diet dared to reduce the annual appropriations level in peacetime below that demanded by the services, such action would have been regarded as a contravention of the imperial prerogative, specifically Article 12 of the Meiji Constitution, which stated that 'the Emperor determines the organization and peacetime standing of the Army and Navy.' In time of emergency or of actual war, it was unthinkable that the Diet would spurn the demands of 'national necessity.'

As in all authoritarian states, fiscal data on Japanese national-defense expenditures were masked. To cite but one example, in a special allocation made by the Diet in February 1942, the army got 9.6 billion yen, but a further 600 million yen earmarked for the army are found embedded in the Finance Ministry's reserve account. In a representative fiscal year (1939–40), the published figures show the ordinary and extraordinary general-accounts



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budget for the army as about 16 per cent and the navy as more than 19 per cent. Nevertheless, it was admitted by Finance Ministry authorities that, starting in 1939–40, the 'Temporary War Expenditure Special Accounts' (introduced in September 1937) exceeded ordinary accounts for the first time. In the case of the army, this excess for 1939–40 amounted to 314 per cent of its ordinary budget; for the navy, 98 per cent.<sup>12</sup>

The Temporary War Expenditure Special Accounts continued to rise as the Pacific War approached and then erupted: allocated in 1940 was a two-service and reserve budget totaling 4.46 billion yen; in 1941, four supplements totaling 12.48 billion yen. Starting in 1942, all the customary general accounts for military and naval expenses were transferred to the Temporary War Expenditure Special Accounts, with certain exceptions. The special account for the two services in 1942 amounted to 18 billion yen; in 1943, 27 billion yen; in 1944, two supplements totaling 63 billion yen; and in February 1945, a final 85 billion yen. <sup>13</sup>

Reducing these complicated figures to simple percentages, we find that ever since the outbreak of the conflict in China in 1937, Japan's total military and naval budget, as a fraction of overall governmental expenditures, was never less than 60 per cent per year. In 1938–9, it was 75.4 per cent; in 1939–40, 72.5 per cent; in 1940–1, 65.9 per cent. Wartime data are hard to come by, but the best estimates are 61 per cent for 1941–2; 66 per cent for 1942–3; 73 per cent for 1943–4; and a staggering 85 per cent for 1944–5. 15

Perusal of a typical Imperial Japanese Army (IJA) budget, the one for 1941–2, reveals the emphasis on new military expenses. The lion's share (65 per cent) went to build up armaments output. Another 21 per cent was assigned to the expansion of productive capacity; 7 per cent, to support for military personnel; and 4 per cent, for economic controls. The remaining 3 per cent was allocated to trade enhancement, encouragement of science and technology, and improvement of maritime transportation and civil aviation. In the 1942–3 budget, the categories of new expenses included not only the expansion of productive capability but also the limitation of costs and the reorganization of production, as well as the storage of vital resources and a relatively small fraction for air defense. <sup>16</sup>

It goes without saying that the enormous wartime expenditures, loyally and expeditiously approved by the Diet, had to be supported by deficit financing, and that the public debt soared accordingly. The military budget of 1943 was five times larger than that of 1938, and ten times larger than budgets preceding the China conflict. By 1944 national war expenditures were double the total of national income.<sup>17</sup>

Foreign observers had long predicted that Japanese public finances could not weather protracted hostilities on such a scale, but the Japanese financial authorities somehow kept the ship afloat to the end, and did their best to meet the services' requests for funds. The Finance Ministry devised clever ways of recycling capital, stressing the control of inflation, exchange rate stability, economies in consumption, and 'extraordinary tax adjustments.' Encouraged by a national policy that called for material sacrifices to be borne by people not serving at the front, the armed forces had only each other to contend with in striving to carve a favorable slice from the 'pie' of national



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resources. First, the individual service determined its fiscal desiderata through its own internal channels; then it struggled, via general staff and service ministry officers, to maximize its share of funding during unofficial and official conferences with the other service (and eventually with Finance Ministry officials). According to one IJA insider, at the interservice negotiations 'each side sounded out the other, entangling itself in 'the ideology of parity' and face, and grappling with matters of budget and amassment of materials, in the course of which, many a dirty trick was played.'<sup>18</sup>

In short, there was almost no public scrutiny of the military organization's system for converting resources into militarily useful forms. The basic effectiveness research for highest level deliberation was performed by agencies that, in practice, were detached from political control and were instruments of the military. In particular, the (Cabinet) Planning Board (Kikakuin) had the ostensible mandate of evaluating the national requirements for mobilization of resources. Retired Lieutenant General Suzuki Teiichi became the head of this bureau in April 1941. Within the War Ministry, the Consolidation Bureau (Seibikyoku) had responsibility for military assessments. The preceding organs had significant input in the secret examination of areas of budget, industrial and technological resources, and manpower.

As for the extent to which the military organization had access to industrial and technological resources necessary to produce the equipment it needed, the industrial revolution in modern Japan had, from its beginnings in the nineteenth century, always been fostered by military necessity. In terms of productive value, the manufacturing industry became the biggest enterprise. by 1937 accounting for 78 per cent of the value of the output of all industries, up 250 per cent in one decade. Since the development of heavy industry, however, was patently insufficient at the time the China conflict broke out in 1937, the civilian authorities worked closely with the armed forces to restructure the economy and generate new emphases. From 1938 governmental control, in the service of the needs of national defense, became more and more evident, attending the passage of the Temporary Fund Adjustment Act, the Temporary Export and Import Control Act, and, perhaps most important of all, the General Mobilization Law. While strict efforts were made to stem the flow of materials, capital, and labor into what were regarded as nonessential industries (such as rayon, paper, spinning, and cement), government-sponsored legislation stimulated the aggregate productive capacity of war-related producers of motor vehicles, rolling stock, iron and steel, petroleum, metals and minerals, machine tools, vessels, and aircraft. The avowed purpose of these programs was to achieve self-sufficiency in vital categories and avoid dependence on sources outside of Japan, Manchukuo, and occupied China.

The scale of the projected buildup of the Japanese Military-Industrial Complex is suggested by the targets set for the close of 1941, as a percentage of the production levels of 1938: synthetic gasoline, up 3,000 per cent; alcohol, up 1,300 per cent; magnesium, up 1,000 per cent; and motor vehicles, up 670 per cent. By 1942, heavy industry reached 73 per cent of total industrial output, up from 38 per cent in 1930. 19



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The improvement in the actual level of production in war-related industries was considerable in relative terms, especially when viewed against the limited resources available. Compared to an output of 445 aircraft in 1930 and 1,181 in 1937, Japan turned out 5,100 planes in 1941, 8,900 in 1942, 16,700 in 1943, and a peak of 28,200 in 1944. Whereas 1,100 aircraft engines were produced in 1937, the figure for 1940 was 5,500; for 1941, 12,200; for 1942, 17,000; for 1943, 28,600; and for 1944, 46,500. These achievements are particularly impressive because the wartime planes were heavier and of improved performance, while the ratio of combat aircraft to trainers and transports increased. For example, in the peak year of 1944, the combat fraction of airplane production amounted to 75 per cent.<sup>20</sup>

Only 500 motor vehicles were manufactured in Japan in 1930. Not until 1938 did domestic output (30,900 trucks, cars, and buses) exceed imports (18,600 vehicles, still representing 40 per cent of the total number). There was no further importation, and domestic production increased from 41,300 in 1939 to a peak of 47,900 in 1941. Military requirements accounted for about two-thirds of motor vehicle manufacture from 1942.<sup>21</sup>

In 1934, only 16,800 total tons of naval ship construction were delivered to the Japanese Navy. By 1941 the figure was 225,200 tons, and the peak of 408,400 tons was achieved in 1944. <sup>22</sup> Steel merchant ship construction, which had dwindled to 20,000–30,000 tons per year in the 1920s and was still only 85,000 tons in 1931, reached 442,000 tons in 1937. After falling off again until 1942, annual deliveries grew to a peak of 1.6 million tons in 1944. <sup>23</sup>

A few other representative annual figures provide evidence of the enhanced productive capacity of Japan, in comparative terms, by the year 1943: aluminum ingot production, 141,100 tons (19 tons in 1933); ingot steel, 7.8 million tons (1.8 million in 1931); coal, 55.6 million tons (27.9 million in 1931). As early as 1940, organic high explosives were being turned out in greater amounts than in the United States.<sup>24</sup>

The armed forces' requirements for clothing, foodstuffs, and medical supplies were largely addressed by civilian factories operating under military contract. Military ordnance was turned out by a combination of government-owned and civilian facilities. Like the Imperial Japanese Navy (IJN), the army possessed an extensive array of arsenal districts and supporting factories. By 1944, civilian factories accounted for 55 per cent of the manufacture of weapons. Civil-military responsibilities for output varied per product. Government arsenals and factories fabricated 69 per cent of the artillery, 63 per cent of the light and automatic weapons, 94 per cent of the gunpowder, and 97 per cent of the special military vehicles. But civilian factories turned out 67 per cent of the ammunition, 91 per cent of the signal equipment, 85 per cent of the optical instruments for navigation purposes, and 100 per cent of the military trucks. Data for 1945 are shown in Table 1.1, exclusive of six research institutes and of installations in Manchukuo and Korea.

The land area of the IJA ordnance manufacturing facilities totaled 15 million square *tsubo* (at 3.952 square yards per *tsubo*), and the building space amounted to 1.1 million square *tsubo*. Main machines numbered about 56,000. There were also 1,030 civilian factories, including those facilities



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Table 1.1 Government Arsenal Output, 1945

Name of arsenal	Number of factories	Number of workers	Main production items
Tokyo No. 1	7	53,000	ammunition, fuses, optical and signal equipment
Tokyo No. 2	11	31,000	gunpowder
Sagami	2	15,000	shells, bombs, special vehicles
Nagoya	8	43,000	rifles, machine guns, artillery, ammunition
Osaka	6	74,000	artillery, fuses, ammunition
Kokura	5	41,000	automatic machine cannon, rifles, ammunition
Total	39	257,000	

Source: BBKS, Vol. 33, Rikuguu gunju dōin, Table 9.

designated for military production and others under direct IJA control. Some 350,000 workers were employed in the civilian factories, which contained 55,000 machines. The Finance Ministry's special-account expenditures for IJA arsenals rose from 69,300,000 yen in 1937–8 to 1,510,900,000 yen in 1940–1.

Comparable figures for expenditure on naval dockyards, explosives factories, and fuel depots increased from 84.3 million yen in 1937–8 to 302.9 million yen in 1940–1. In the twenty-four to twenty-seven shipyards engaged in naval ship construction during the war, a total of 162,400 workers were employed on average in 1941, and 312,000 – almost twice as many – in 1944.<sup>25</sup>

As for military aviation, the IJA operated air arsenals only for the purpose of prototype manufacture, and for serial production depended entirely on civilian factories, i.e., the Mitsubishi, Nakajima, Hitachi, Kawasaki, Tachikawa, and Nihon Kokusai Kōkū Kōgyō plants. Of these, the first three were shared with the IJN. <sup>26</sup>

In sum, the factor of access to industrial-technical resources posed no obstacles *per se* for the Japanese armed forces. Their unyielding problem in this regard centered on the country's limited economic foundations, and this fact caused a serious degree of interservice competition and squabbling, as will be seen. Still, the rapid improvement in the base of the Japanese economy, most apparent in militarily critical production sectors, had enormous domestic ramifications. Not only was heady self-confidence fostered at the national level, but the prosperous development of income and output also 'cemented firmly the union between the conservative, big business wing of Japan's political life, and the aggressive radical elements of the army and navy.'<sup>27</sup> Despite later protestations of duress and coercion, the civilian component of Japan's military-industrial complex went to the altar not entirely unwillingly.

In terms of access to manpower, the Japanese armed forces were able, until close to the end of the war, to squeeze optimum numbers of men from the



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country's demographic pool. They started with a self-perceived edge, unabashedly trumpeted by the prewar and wartime authorities: 'the unique nature of the Japanese polity and the peculiar psychology of the Nipponese people who are not only willing, but deem it the highest honor, to serve in the army and the navy.' Draft dodging was never a significant problem. Opposition to wartime policy was individual and sporadic.<sup>28</sup>

The national census of 1940 put the population of the Japanese homeland at 73,114,000, of whom 50 per cent (36,566,000) were males. The IJN had 311,000 personnel on active duty at the time the Pacific War broke out in 1941. In the IJA, 2,287,000 men were in service at the same time, deployed as follows: 512,000 in Japan and Formosa, 120,000 in Korea, 649,000 in Manchuria, 612,000 in China, and 394,000 poised to strike in the South. Another 4,680,000 men were in army reserve status.<sup>29</sup>

According to conscription records for the fiscal year 1942–3, from 649,000 men scheduled to take the medical examination, it was expected that 60 per cent would be approved for active duty: 339,000 for the army, 53,000 for the navy. Addition of the next category – men judged to be qualified as conscript replacements – would bring the total passed to 508,000, or more than three-fourths of those reporting from the class of 1942–3 for the draft physical.<sup>30</sup>

Navy records reveal the ratio of IJN enlisted volunteers to the grand total of men enrolled per year. Between 1937 and 1941 inclusive, about one-third of the new sailors were volunteers; the rest were draftees. Once the Pacific War was under way, not only were many more men inducted annually, but the number of volunteers also increased dramatically, especially among those opting to enter the naval air corps. In 1942, 54.1 per cent (63,629) of the IJN's total of enlisted inductees (117,667) were volunteers, including 8,100 aviation aspirants. The figures for 1943 were 67.8 per cent volunteers (111,739, including 42,339 aviation) from a total of 164,739 new men. In 1944, the volunteers numbered 60.6 per cent (208,660, including 106,660 aviation), among a total of 344,640 enlisted men. The last year of the war, truncated by capitulation, saw a volunteer increment of 66.9 per cent (177,600, including 88,600 air force), from a grand total of 265,600 new sailors.<sup>31</sup>

The national census for the Japanese homeland in 1944 gave the civilian population as 74,433,000. The number of males had dropped to 34,440,000 (46.3 per cent); but the IJN had been built up to a strength of 1,295,000. On active duty in the IJA there were 1,479,000 regulars and 2,600,000 draftees, for a total of 4,079,000 troops, actually 100,000 over authorized strength.

Next year, at war's end in 1945, the population in the homeland (excluding both Okinawa and the Northern Islands) had declined to 72,147,000, of whom 47.2 per cent (34,054,000) were males. The final overall strength of the IJN was 1,693,000; of the IJA, 5,500,000 men.<sup>32</sup>

The peak figure for Japanese military and naval manpower mobilization therefore comes to some 7,200,000 men by the close of the war – 10 percent of the national population, or 21 percent of the total male component in the homeland. Germany, with approximately the same male population as Japan, had mobilized a top strength of 10,200,000 in the armed forces – over 40 per cent higher than the Japanese peak figure. In military casualties, the Germans sustained enormously larger losses than the Japanese. The most



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conservative estimates of German losses are in the range of 10,100,000 military dead and wounded. IJA losses have been given as 1,466,200 killed and 53,028 wounded – a total of 1,519,228; IJN losses as 457,800 killed and 13,342 wounded – a total of 471,142. Thus Japan's military and naval losses amounted to a grand total of 1,990,370 men.<sup>33</sup>

The most useful point to be made in presenting the Japanese and German mobilization and casualty figures was to compare the wartime scales of effort invested and cost incurred by the main Axis powers. Only recently has it become possible to obtain inside documentation providing fuller comprehension of the extent of the tribulations encountered by the Japanese military organization, despite a number of successes, in dealing with the question of securing access to indigenous manpower resources.

For example, it is not widely known that the drafting process, whether it produced conscripts for the army or the navy, was always under the administrative jurisdiction of the War Ministry and the Home Ministry; local details were handled by the regimental recruitment zone commander. This meant, in practice, that the IJN could not stipulate the number of conscripts it wanted. The Navy Minister would have to obtain the War Minister's concurrence with the IJN's proposal. But the IJA did not need to consult the IJN or establish the latter's intentions. In the peacetime period before the outbreak of the conflict in China, this system posed no acute problem; but later, when the IJA underwent a giant increase from 500,000 men in 1937 to 2,100,000 in 1941 and 3,100,000 in 1943, it proved very difficult for the IJN to compete for the still finite base of manpower. Though the two services expended much time and energy in trying to reach accommodation of their positions, the IJN representatives typically came away dissatisfied and tended to think in makeshift terms. The vigorous program of volunteer enlistment, mentioned earlier, was one approach; but that source of manpower was not unlimited, and it was always necessary to come back to the conscription device.34

Manpower demands accelerated greatly from early 1944. In an effort to meet the rising recruitment needs of the armed forces while maintaining the number of workers required by industry, the Japanese authorities tinkered with broader age limits, lower criteria for induction, and consolidated categories of service. As early as April 1940, the IJA had been encouraging the training of youngsters to become noncommissioned officers in specialized elements such as the air force, military police, tank corps, and military bands. At the end of 1943, a system of recruiting 'special military cadets' between the ages of 15 and 20 was instituted, with an emphasis on technical branches involving aviation, shipping, and communications. Accelerated promotions were prescribed for the better lads.

The Military Service Law was revised, effective from April 1941, to terminate the system of a 'second replenishment service.' In late 1943, the effective conscription age for Japanese males was lowered from 20 to 19 starting from 1944, and the upper age limit was raised to 45 from 40. Medical standards were also eased. Nevertheless, it was in the hitherto sacrosanct precincts of higher education that the most dramatic change was decreed on 1 November 1943: the abolition of student deferments from military service.



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The authorities expected that the new source of manpower would yield 96,000 individuals of draft age and would breed high-quality, well-educated officers for both services, buttressing the air forces in particular.<sup>35</sup>

It had become evident that the Japanese armed forces were suffering from a number of deep-seated qualitative problems. The beneficial but long-range effects of the lowered draft age would not be felt until after the autumn of 1944, when a huge number of young conscripts would enter service from a double-size class of 1.4 million 19- and 20-year-olds first eligible for examination. Until then, the military regarded the age of its regulars and reservists as too high. Training was desperately behind schedule. Of the more than 7 million men in the armed forces in 1945, it was estimated that only about 1 million were fully trained. There were particular shortages of men in categories where job skills were most urgent, such as anti-aircraft, signal, shipping, and aviation units.

Officers were in especially short supply in the armed forces at the very time that the services were larger and more complicated than ever. Of a potential pool of 123,000 army officers, 95,000 were in uniform in 1945. But the IJA's tables of organization called for 142,000 officers – 102,000 in line assignments and 40,000 on desk duty. Yet there was only a sprinkling of regular officers – 34,000, including 15,700 commissioned from the Military Academy, and 6,000 probationary second lieutenants.

In IJA line units there were merely enough regular officers to fill 20 per cent of the posts; for desk work, 30 per cent. One result was the servicewide need to fill officers' slots, starting with those of major generals, from the next lower rank. Hence 15 per cent of line colonels' posts were held by lieutenant colonels; 40 per cent of lieutenant colonels' by majors; and 70 per cent of majors' by captains. As a result, the IJA was short 26,000 captains – about 80 per cent of the authorized number. Most line companies had to be commanded by first lieutenants. As for the staffs of the ground divisions, a mere 35 per cent were products of the Army War College.

The situation was even more troublesome in desk posts, where there was a shortfall of fifty major generals and where the reliance on lower-ranking officers was becoming chronic: lieutenant colonels filled 60 per cent of billets calling for a colonel; majors, 90 per cent of lieutenant colonels' posts; captains, 85 per cent of majors' posts; lieutenants, 90 per cent of captains' posts. The healthiest situation was that of slots for second and first lieutenants in line or desk work, since there was adequate input at that rank from the Military Academy and from the promotion of seasoned noncommissioned officers.<sup>36</sup>

There were numerous well-trained ex-servicemen in the Zaigō Gunjin association, but they were often locked into crucial war jobs. In December 1941, 270,000 of 4,680,000 ex-servicemen were listed as draft-deferred; in November 1944, the figure was 1,553,000 deferments among 5,855,000 ex-servicemen. Admittedly, many of the veterans were elderly or in ill-health, but the IJA found its own manpower needs obstructed by the fact that, as of 1944, 87 per cent of draft-age males were classified as vital to the war effort, especially those engaged in food production and munitions manufacture.<sup>37</sup>