

General Mobilization as Foundation of Japan's War Machine in Pacific War

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Abstract:- The political dynamics in Japan during the pre-World War II period brought changes in political and social economic order. The 1927-1931 periods were considered as radical shift in political order with the raise of ultranationalist and military group that overthrew government's political party. This militaristic government carried economy to prepare country for next major war. The Sino-Japanese War of 1937 was the beginning of the general mobilization of the country's economy and civil society. However, there is no special research focusing on general mobilization and economic War in the Pacific War period. The most recent aspect of this research was the analysis of war-torn economics on the general motions of the economic, industrial and labor sectors for the need of war such as air and sea armory and the role of the state in the mobilization. This study was important in terms of dark historical perspective of mankind as a lesson that totalitarian state power by military bureaucrats who conspire with corporations and technocrats result in massive warfare and massive casualties among the common people. Research on this topic is very few at the academic level in Indonesia. All data utilized in this research was obtained from library materials and government's archive using qualitative method and historical approach.

Keywords:- Economic War, Manchuria, Pacific War, Zaibatsu, General Mobilization.

I. INTRODUCTION

After Meiji Restoration (1868), Japan continued to catch up Western modernization, especially in field of industrial and military economics. There were various events of global economic crisis, military expansion, and social instability between 1920s and mid-1945s. These events changed Japanese political system toward fascism. The government of civilian political parties began to be undermined by military groups and various economic units with great potential to support Japan in the war. The war machines in this study referred to all economic potentials, industries and civilians utilized to meet Japan's needs in the Pacific War. In the history of the Japan's economy, based on various literatures, World War I has spawned economic miracle in Japan. The economic and industrial sectors in Japan's colonies were linked to the miracle of economic growth in the 1930s. During

World War I, the European economy suffered a collapse and Japan experienced an economic boom. This brings a blessing for Japan. The market in Asia that was once dominated by Europeans was taken over by Japan. This made the industrial and economic sectors of Japan grew rapidly.

The Portsmouth Treaty was made as a final agreement of post world war I and brought detrimental impact to Japan, although Japan won World War I. The agreement stated that Manchuria should be returned to China. If Manchuria was returned, Japan would lose key backbone area that supported Japan's economy and industry. In response to the refusal of this agreement, there was a massive public demonstration that led to the riots of 5 September 1905 at Hibiya Park or also called the Hibiya Park Incident¹.

Japan's defeat against United States at the Battle of Midway in 1942 became a turning point for Japan's power in the Pacific War. Due to losses and damages suffered, Japan began to make some changes in the colonies, which one of them was the policy of recruitment of forced labor from regions in Southeast Asia. The Burma-Siam railroad project was one of the most notable projects for having killed so many people and the project was called the "Death Railway". The rail line was built to avoid dangerous sea routes from Southeast Asian regions to the frontline battle in Burma and connected Bangkok and Rangoon.

II. PROBLEM DEFINITION

The problem analyzed in this research was government's effort and policy in carrying out general mobilization: economy, military industry and people to support the war in 1930s with the scope of winning the Pacific War. In the context of the Pacific War, the allocation of economic power to war was intensified when Japan's government passed the National Mobilization Act in 1938. By this law, Japan entered the first step towards total war.

III. RESEARCH METHOD AND CONCEPT

¹Surajaya, I Ketut.(1995). Demokrat Yoshino Sakuzo: PenentangGigihAnarkisme, Fasisme dan Komunisme Jepang padaZaman Taisho. Depok: FakultasSastra Universitas Indonesia, p. 46-47.

This study used qualitative method. The data was collected through literature study obtained from library books of the University of Indonesia, international journals, e-books and other libraries. The scope of this study covered economic and industrial sectors mobilized for the war and the mobilization of the people prior to and during the Pacific War from the 1930s to the end of the Pacific War in 1945. This study used Historical Approach.

The economic concept of war used in this study was the concept of war economy according to Rapoport (1992) namely the allocation of resources for the production of goods and services that have never been used before². The production herein was mainly the production of military-related equipment such as weapons and war transport of land and air which can be used to achieve a power. In line with Rapoport, Smith (1959) defined that economic mobilization was the utilization of country's economic potential for war purposes with primary aim of expanding armory as one of major elements of war while supplying basic needs of the people³. When the Japan's government passed the National Mobilization Act in 1938, Japan entered step towards total war. Meeting domestic needs was just as important as keeping the defense line in the battlefield. Ludendorff in Junichiro (2011) stated that the term of total war referred to the mobilization of economic, political, technical matters and civil power in addition to the military forces for war⁴.

IV. LITERATURE REVIEW

Japan's policy in economy, based on literature of History of Indonesian War of Independence, was associated with Japan's spolicy in Indonesia during the occupation era. Indonesia, in period of 1941-1945, was source of Japan's power in the war and also carried economic mobilization in the country and in its colonies. David Flath, in his book 'The Japanese Economy' (2005), outlined Japan's industry policy from 1850 to post-World War II Era during American occupation⁵. Flath explained generally about several policies in military industry starting from the end of Meiji Era to the beginning of Taisho Era. Flath also mentioned several policies related to the military industry contained in National General

Mobilization Law (*KokkaSodoin Ho*) in 1938, Automobile Industry Law in 1937 and Aircraft Industry Law in 1938.

Kenichi Ohno, in his book 'The Economic Development of Japan: The Path Traveled by Japan as a Developing Country' (2006), discussed briefly and comprehensively about the development of Japan's economy in 1930s. Ohno explained that World War I brought its own blessings for Japan as global demand for Japanese products increased and the 1931 invasion of Manchuria was followed by the establishment of Resource Mobilization Plan and National Mobilization Law in 1938 marked Japan as a country ready for a 'total war'⁶. The main purpose of this economic plan was to optimize military production. Heavy industries such as aircraft and warships became priority. Consumption and light industry were suppressed due to limited raw materials. The East Asian nation (Manchuria, Korea and Taiwan) as the main raw material suppliers were considered inadequate, so Japan started to look at Southeast Asia regions.

Jürgen Melzer discussed the development of Japan's air power in the 1930s in an article entitled "We Must Learn from the Germany: Gliders and Model Airplanes as Tools for Japan's Mass Mobilization" (2014). The focus of Melzer's discussion was the German influence on the Japan's aircraft and aviation industry. Melzer argued that German aviation industry controlled by the Nazis affected Japanese aviation policies⁷. German glider fever triggered public interest, especially young people, to flight activities. The aircraft militarization in Japan during late 1930s was influenced by the movement of sleds that Germany had done before. In 1930s, Japan Glider Club made a simple sled with an open cockpit based on the design of German *Zögling* plane. Japan also invited Wolf Hirth, a skydiver, to train pilots and flight students. Melzer also explained that Wolf Hirth and his team were first contracted by the Nippon Glider Federation to train pilots and students to become sled instructors. After Hirth returned to his home country, glider fever appeared all over the country.

Jeremy A. Yellen (2016) in an article entitled 'Into the Tiger's Den: Japan and the Tripartite Pact'(1940) discussed the relation between Japan and Germany which led to Axis alliance along with Italy. In this article it was stated that Japan's decision to join the Axis alliance was related to Japan's fear of Germany⁸. Japan was worried that Germany will invade Asian regions controlled by France and the

² Rapoport, A. (1992). Peace: An Idea Whose Time Has Come. University of Michigan, p. 188

³ Smith, R. E. 1959. The Army and Economic Mobilization. United States Army in World War 2: The Army Department, p. 3

⁴ Shoji, Junichiro. (2011). The Pacific War as Total War. Tenth International Forums on War History. Tokyo: National Institute for Defense Studies, pp. 1-8. Need to remember that Ludendorff was an aggressive German General in World War I

⁵ David Flath, The Japanese Economy. (2005). New York: Oxford University Press Inc.

⁶ Kenichi Ohno, The Economic Development of Japan, The Path Traveled by Japan as a Developing Country. Tokyo: GRIPS Development Forum, 2006

⁷ Jürgen Melzer, We Must Learn from the Germany: Gliders and Model Airplanes as Tools for Japan's Mass Mobilization, (Contemporary Japan, 2014). Melzer was a former Germany glider pilot in World War II.

⁸ Jeremy A. Yellen, Into the Tiger's Den: Japan and the Tripartite Pact 1940, (Journal of Contemporary History, 2016)

Netherlands. If this happened, of course Japan would lose important areas that could supply their needs for war. The concept of the Great East Asian Co-Prosperity Sphere, initiated by Japan, would definitely fail if Germany seized Southeast Asia region. Foreign Minister Matsuoka later declared Japan's intention to form alliance with Germany for the expansion of power in Southeast Asia and establish a new world order in Asia with Japan as its leader. This was related to the establishment of the concept of Great East Asian Co-Prosperity Sphere in 1940s. The national policy was announced on radio in August 1st, 1940 implicitly and aimed to gain German recognition of Japan's rule in Asia.

Takuma Melber (2016), in an article entitled 'The Labor Recruitment of Local Inhabitants as *Romusha* in Japanese-Occupied South East Asia, discussed the mobilization of forced labor or *romusha* from Japanese colonies in Southeast Asia, especially Malaysia, Singapore and the island of Java, Indonesia. During the course of war, from 2nd Sino-Japanese War to the Pacific War, Japan needed large supply of natural resources and manpower. The total mobilization of the war imposed by Japan was not only applicable in the country, but also in the Japan's colonies. This mobilization was related to the concept of Greater East Asia Co-Prosperity Sphere (*Dai TōwaKyōEiken*) that Japan used to legitimize its expansion in the South East Asia region⁹. Using the promise of independence from the occupation of Western imperialism, this propaganda was used by Japan to control its colonies for the interests of Japan's imperialism.

Japan's defeat against the United States at the Battle of Midway in 1942 became a turning point for Japan's power in the Pacific War. Due to the huge number of losses and damages, Japan began to make changes in the colonies, which one of them was the recruitment of forced labor from Southeast Asia region. The Burma-Siam railroad project was one of the most notable projects for having killed so many people and the project was called as "Death Railway". The rail line was built to avoid dangerous sea routes from Southeast Asian regions to deliver warfare to the front line in Burma and to connect Bangkok and Rangoon. At the beginning, the people were welcomed for recruitment of Burma-Siam railroad project. Many people volunteered to become workers because of the payment promised by the government. However, there were people who ran away from the project and told candidate workers about the real conditions in the workplace. Low food consumption and poor worker's health made many workers fell ill and died. Japan colonial government applied the policy then to homeless people and beggars on streets. Melber said that this action was similar to the Nazi's policy on 'cleaning' the gypsy from streets. The difference was Nazi sent gypsy to concentration camps while Japan sent beggars as forced labors (*romusha*), for project

development. Many civilians fled in order to avoid recruitment as *romusha* or hide. This indicated that roots of the Japan's war machine were declining.

The Manchurian Incident in 1931 became Japan's entry point into fascist period after a series of fascist movements since the end of World War I in 1919¹⁰. The fascism here referred to the context of political ideology and also in the context of social ideology¹¹. Japan's fascism was developed and reflected in the social movements carried out by civilians assisted by military and the development of fascism, which later underlie fascist policies based on National General Mobilization Law. Japan was considered to have implemented similar fascism like Germany and Italy, because all three were members of Three-Country Alliance. In fact, there was still debate among experts on the concept of fascism applied by Japan. Paxton (2004) stated that Japan was more suitable to be called an expansionist dictatorial government rather than a fascist regime because there was no single party in power in Japan like Fascist party in Germany led by Adolf Hitler¹².

Mimura (2011) stated that revolution managerial imposed by technocrats brought fascist tendencies reflected in the policies created¹³. Mimura raised theory of managerial revolution by James Burnham in his book entitled *The Managerial Revolution: What is Happening in the World* (1941). This theory could be said against Marx's theory that the working class or Proletariat replaced Capitalists. The existence of Capitalist as a manager was not taken over by the proletariat, but by another 'manager' ('technocrat')¹⁴. These managers had no means of production, but they had power to control the course of production using bureaucracy. In other words, the state became the control holder of economic activity. The elimination role of political parties in parliamentary institutions made technocrats held certain position to take decision without fear of being criticized by political parties. Japan, which previously implemented an administration through political parties, began to turn to technocracy precisely after the murder of Prime Minister Inukai in 1932. In the following years, various policies were issued to legitimize the raise of state power including civilian

¹⁰ Maruyama, Masao. (1969). *Thought and Behavior in Modern Japanese Politics*. London: Oxford University Press, p. 27.

¹¹ Surajaya, I Ketut. (1995). *Demokrat Yoshino Sakuzo: PenentangGigihAnarkisme, Fasisme dan Komunisme Jepang padaZaman Taisho*. Depok: FakultasSastra Universitas Indonesia, p. 38

¹² Paxton, Robert O. (2004). *The Anatomy of Fascism*. New York: Alfred A. Knopf, p. 200.

¹³ Mimura, Janis. (2011). *Planning for Empire : Reform Bureaucrats and The Japanese Wartime State*. New York: Cornell University Press, p. 8.

¹⁴ Burnham, James. (1941). *The Managerial Revolution: What is Happening in the World*. New York: The John Day Company, Inc. p. 72.

⁹ Takuma Melber, *The Labour Recruitment of Local Inhabitants as Romusha in Japanese-Occupied South East Asia*, (IRSH 61 Special Issue, 2016).

forces for war such as National General Mobilization Law in 1938, which continued to be revised until 1944. Japan started the war expansion in early 1930s when ultra-nationalist and military groups dominated the government. Removing factions who hindered expansionist vision including the Rikken Seiyukai party, which had previously been a military ally, strengthened military dominance. In 1940, Prime Minister Fumimaro Konoe combined political parties with diverse ideological grounds into the Imperial Rules Assistant Association (*TaiseiYokusankai*). With the merging of political parties, Japan became a single 'party' state. The association was formed to support Konoe's expansive vision. Although Japan did not meet criteria of a fascist state like Germany, this government had a national mobilization law. Under this Law, the government held control over all people's resources.

Manchuria as an area rich of natural resources and fertile soil had become target of Japan for their economic belt. However, Japan's attempt to seize control of Manchuria was constrained by Russia on the northern part of Manchuria. Manchuria was Japan's main capital for battle in the future, including Pacific War and the establishment of Greater East Asian Co-Prosperity Sphere in Asia. Japan's occupation of Manchuria was part of strategy of the new financial cliques (*shinko zaibatsu*). This the new financial cliques continued as an influential ruler in Manchuria aside of military and bureaucrats¹⁵. The new financial cliques model was engaged in heavy and chemical industry and carried development of technology as the main goal. These cliques took advantage of the situation when traditional financial cliques began to lose its influence after the booming economy after World War I ended.

The 1927 financial crisis was destructive followed by *Showa* Depression between 1930 and 1932 as the crisis was banking crisis. The crisis did not have a wide impact on the socio-economic life of the community because customers of small bankrupt banks could move their savings to major banks¹⁶. The *Showa* Depression was generally caused by two factors: global depression preceded by 1929 Black Thursday Events and deflationary policies and the adoption of a gold standard exchange rate like the pre-war period. Externally, the global crisis that began with the crash of Wall Street stock market in the United States automatically hit countries that also embraced capitalism.

On the other hand, in 1920-1930s periods, heavy industries such as shipping, transportation and chemical industry began to establish. One of main factor in

development of this sector was the political support of the Seiyukai party which was then affiliated with the military. In addition, the government also imposed import duty tariffs and encouraged formation of industrial cartels to limit competition¹⁷. Both measures indicated Japan's transition from a free-market economy to a protectionist system and led to a monopoly. During 1920-1930s, there were two periods of leadership of Seiyukai party: the cabinet of Tanaka Giichi (1927-1929) and Inukai Tsuyoshi (1931-1932). The relationship between military and Seiyukai was actually not very harmonious, as military often took offensive action without the knowledge or not fully supported by Prime Minister. This consequence had to be accepted by Seiyukaifor opportunistic steps in alignment with the military.

V. DISCUSSION

A. Financial Cliques and Technocratic Militarism

The new financial clique was related to the military, especially in the context of developing production for national defense. The closeness between these cliques and the military or bureaucrat was reflected in the presence of Manchurian ruling group known as "two *ki* and three *suke*". This name referred to Hideki Tojo, Hoshino Naoki, Kishi Nobusuke, Matsuoka Yosuke and Aikawa Gisuke. The harmonious relationship between these two groups was closely related to natural potential of Manchuria. The new financial clique, including Nissan, obtained a concession to build an industry in Manchuria. In addition to Nissan, Nitchitsu also built chemical industry in Korea.

Emphasizing nationalist technocratic impression, the big of new financial clique used names with the word "Japanese" or national elements in them¹⁸. Nissan, Nissō and Nitchitsu include the word Nippon in its name. One of the well-known subsidiaries of Mori Group also used the word denoting nationality in its name, Shōwa Denkō (*wameans* Japanese). It was much different from the traditional financial clique that mostly used surnames or clans for the company name among others were Mitsui, Mitsubishi, Sumitomo and Furukawa. This step was taken to give impression that they were affiliated to the state and supported the state's efforts to build a national power.

In early 1937, Military Flight Headquarters run the project of "The Second Air Force". Ministry of Communications, Imperial Aeronautical Association and the All Japan Youth Union Military Aviation Headquarters set up Greater Japan Youth Air Force (*Dai Nippon SeinenKōkūdan*). The corps was aimed to promote a glider to youth throughout Japan. Flight training was also held in schools. This training not only taught students to fly planes, also how to assemble their own simple sled. The Greater Japan Youth Air Force was later merged with several other civil aviation organizations

¹⁷*Ibid.*, 104

¹⁸ Mimura, *op. cit.*, 27

¹⁵The term of *shinko zaibatsu* usually referred to five major corporation groups; 1) Nissan (Nippon Sangyo Kabushiki Kaisha), 2) Nissō (Nippon Soda Company), 3) Nitchitsu (Nippon ChissoHiryo Kabushiki Kaisha), 4) Riken (RikagakuKenkyuujō), and 5) Mori Group

¹⁶*Ibid.*, 121

and became Great Japan Aviation Association (*Dai Nippon Hikōkyōkai*) in 1940. The development of aviation activities in Japan showed that Japan won public support for the construction of national air power with great contribution from Germany to this development.

The Industrial Control Act governed the state-controlled cartel business in 1931. This policy was the first step in the concept of national economy, when the state controlled all economic activity. This concept was subsequently embodied in the National General Mobilization Act in 1938). These legal foundations aimed to create state with high-level defense power. This policy was a system of people's control to achieve a mobilization goal.

B. Foundation of Mobilization Law

As a legal basis for supporting the war, the government's main step was to establish the National General Mobilization Act (*KokkaSodoin-ho*) in 1938. Prior to the enactment of the National General Mobilization Law, the government issued a policy to control the industry, known as the Critical Industries Control Law in 1931. After the military took over the government, the National Public Mobilization Law was enacted to justify total state control of all economic and industrial activities. In essence, the economic concept of war with total economic mobilization aimed to implement the concept of a state with a high level of defense¹⁹.

The following text was the article 1 in the National Public Mobilization Law "Under this law, the so-called national general mobilization is the deployment of all state power as effectively as possible by operating and controlling human and material resources during a state of war -including emergency conditions appropriate to the context of war and other similar conditions - to achieve national resilience goals."²⁰

Article 1 stated that in a state of war, the state was entitled to take over all resources that can be used to strengthen national defense. In other words, the state had the right to control various strategic sectors including those owned by the private sector. The war referred in this article was total war, when all resources were used for the benefit of war. In a totalitarian government, the state played major role in controlling mobilization of resources and technology so that there was a mutual relationship between bureaucrats, military and technocrats.

Article 2 in the National General Mobilization Law consisted of nine items, which contained types of commodities

that fell into the mandatory mobilization category. These commodities included military equipment, clothing and foods, medicines and medical equipment, transportation and communication equipment, lighting and fuel. Not only products, the state also controlled the production factors used to produce these products. Government controlled over production factors as stated in the following article 2 points 8:

"Raw materials, materials, machinery and other equipment required for the production, repair, distribution and management of types of goods mobilized on the points of the foregoing article"²¹.

Not only raw materials and capital, state also controlled all works or practices related to production activities of goods arranged in the second article. This was stated in article 3 point1: "Things to be mobilized include production, preparation, distribution, export, import and storage"²².

Based on chapter 1,2 and 3, State had the right to mobilize all its main elements related to the economic and industrial fields. Under this Law, state had full control including industrial bases outside Japan such as in Manchuria. The name of Manchuria was changed to Manchukuo in 1932 with Emperor Pu Yi as leader. Although emperor of Qing led the area, those who filled strategic positions were Japanese because Manchukuo was indeed established as puppet state by Japan.

C. Manchuria as the Backbone of Mobilization

Industrialization in Manchuria was the first step taken by Japan in the economic agenda of war²³. The industrialization plan in Manchuria had begun since 1931 after the invasion of the Kwantung Army. The hallmark of this economic concept was that the state acted as the manager of economic activities replacing the private capitalists and carried national goal with military approach. The main force in Manchuria was the Kwantung Army with a vision of realizing a planned economy ('war') with Manchuria Railway Company(Mantetsu) as its alliance. This economic system underlies the industrial development in Manchuria. The industry developed in Manchuria was heavy industry, especially those related to military commodities. Shortly after the Kwantung Army occupied Manchuria, Kishi began to make visits there and establish relations with the military. This was where Kishi and Kwantung army began to work out a controlled economic plan.

The Kwantung Army initially carried monopolistic principle of "one industry, one company" with the State as its manager. However, Kishi realized that industrialization would not be optimal if only relied on capital from the State. Kishi turned the principle into "the whole industry of one company"

¹⁹Known as KōdoKokuboKokkareferred to a system of total mobilization and war economy system controlled by country in order to develop state defense.

²⁰National Mobilization Law, accessed, 14 Agustus 2018 <https://libcom.org/files/Japans%20Wartime%20Use%20of%20Colonial%20Labour.pdf>

²¹Ibid.

²²Ibid.

²³Mimura, op. cit.,61

and took Nissan to become the main company. Based on the situation, government of Manchukuo and Nissan established Big Industrial Development Holding Company (Manshu Jukogyo Kaihatsu Kabushiki Kaisha) or shortened as Mangyo Corporation.

In 1937, Hoshino and Itagaki created Five Year Plan which one of its aims was to open up access to Manchukuo resources for national defense (see Table 1. Production Target in Five Year Plan for Primary Industry). This was Japan's attempt to secure the power in Manchukuo and separate Manchukuo from China. Industries developed under this plan were armaments and ammunition, airplanes, automobiles, steel industry, coal and electricity.

As production demand increased, the Kwantung Army took steps to legalize recruitment of labor for forced labor. On 13 May 1937 Military Supplies Inventory Policy was issued which authorized the use material, land and forced labor recruitment to meet military needs. With the enactment of National Mobilization General Law of 1938, Japan and Manchukuo were entitled to require the employment of citizens and recruit experts to maximize the production process. In other words, Manchuria was the backbone of Japan's massive mobilization.

Table 1. Production Target in Five Years Plan for Main Industry

Product	Target	
	Japan	Manchukuo
Automobile (per 1000)	90	10
Machinery (per 1000)	45	5
Steel plate (per 1000 ton)	9.000	4.000
Oil (per 1000 kl)	3.250	2.400
Coal (per 1000 ton)	72.000	38.000
Zinc (per 1000 ton)	70	30
Magnesium (per 1000 ton)	9	3
Electricity (per 1000 kw)	12.750	11.170
Shipyard (per 1000 ton)	930	860

Source: Yamamura, Kozo (ed.). 1997. *The Economic Emergence of Modern Japan*. Cambridge: Cambridge University Press, page. 144

Domestically, other new financial cliques were included in the economic agenda of war. Nippon Soda or shortened to Nisso²⁴. Nihongiwas Nisso's main factory that stood in Niigata. Nisso actually had several factories such as in Toyama, Aizu factory in Fukushima, Kuroi factory in Niigata, in Tokyo, Takaoka factory in Toyama and in Saitama. Although Nisso had many factories, the experimental and production activities were based in the Nihongi factory. Prior

to 1931, Nisso was not a big company and had not experienced much development. The turning point of Nisso was the Manchuria Incident in 1931, when an incident occurred in Manchuria, military began to establish cooperation and ordered carbon tetrachloride and ethane hexachloride for smoke bombs. Orders from the military stimulated Nisso's industrial development, which began to expand into organic chemistry²⁵.

The Manchurian incident in 1931 proved to bring rapid progress to Nisso and became the first company to develop ethylene glycol²⁶. Nisso began to step into the new financial cliques when they began developing metallurg²⁷.

Metallurgical development was carried out in other factories such as Kuroi, Toyama and Aizu. Steel alloy products such as ferromanganese and ferrosilicon for steel began to be produced at the Kuroi plant in 1932. The Iwase plant also produced steel alloys such as metallic magnesium and magnesium carbonate. Previously, the Toyama factory produced metallurgical products before being moved to Iwase. Toyama then focused on the production of metallic sodium carbonate (Table 2 was a list of Nihongi Factory products which were military orders).

Table 2. Ordered Products on Military Instruction in Nihongi Factory

Product	Year	Use
7C	1935	Poison gas
Isoheptane	1937	Fuel
Isohexane	1937	Fuel
Triphenylarsine	1938	Sneeze gas
Bromobenzilcyanamide	1940	Tear gas

Source: Shimotani, Masahiro. 1984. Formation of "New Zaibatsu" in Prewar Japan: Case Study on Nisso Konzern. *Kyoto University Economic Review*, p. 48

The new financial clique related to Manchuria, was also keen to open factories and invest in Korea. A company known for its large investment in Korea was Nichitsu, short for Nihon Chisso Hiryo Kabushiki Kaisha, a company founded by Shitagau Noguchi in 1908. Previously in 1906, Noguchi had built Sogi Electric Company, a hydroelectric power plant in Okuchi, Kagoshima Prefecture. The company enjoyed great success because the power needed for mining activities in the area. In 1908, Noguchi founded the Japan Carbide Company in Minamata. In the same year they united two companies under the name of Nichitsu. Nichitsu's main product was a chemical fertilizer in form of calcium carbide processed product. Nichitsu then produced other *calcium carbide*

²⁵ Chemicals unit consist of carbon and hydrogen, usually used for textiles, medicines, perfumes, etc.

²⁶Ethylene glycol was an organic compound used as a coolant, in this context, to cool down aircraft engines.

²⁷Shimotani, *loc.cit.*, 51-53.

²⁴ Sodium Carbonat, usually used in clothes softening

derivative products such as acetic acid, ammonia and explosives. In 1924, Nichitsu began to expand into Korea. Colony government there supported this expansion. Korea was annexed by Japan since 1910. Nichitsu invested in power plants, chemicals, refineries and heavy industry²⁸.

In the aviation field, Nakajima Company was one of the leading industries. Established in 1918 by Chikuhei Nakajima, the company was one of the main aircraft manufacturing and machinery suppliers for the military. Nakajima began developing aircraft engine technology in 1924 to meet the needs of domestic aircraft. Nakajima's company development was inseparable from the role of the military, considering that Nakajima himself was a pilot of the airship in the Navy (Imperial Japanese Navy). Nakajima built the company after resigned from the Navy in 1917.

In human resources, Korea was potential source of workforce for Japan. The mass production of Nakajima started running after getting military attention for the Kotobuki machine in 1931. Nakajima's production was not limited to war planes alone. The company also produced about 7,000 civil aircraft units and increasingly built new plants throughout 1942-1944 to fulfill military orders. One such factory was the Handa factory in Aichi Prefecture used for the production of *tenzan* and *saiun* aircraft. To support this production, the government began to recruit workers from colonies to meet production targets. Japan had mobilized workforce from Korea since 1939 and the number has increased drastically in 1944.

The recruitment of workers from Korea was carried out by force, which lasted from September 1944 to August 1945. The recruitment then succeeded in mobilizing 1,000 workers for one factory²⁹. These workers were forced to work overtime with strict supervision and were not provided with proper facilities. Production demand also led to a substantial number of underage workers. The working age of workers from Korea ranges between ages 13 – 50³⁰.

Table 3. Number of Korean Workers Recruited by Force to Work in Japan's Industrial Segment year 1939 – 1945

Year	Coal	Iron Mine	Construction	Cargo and Transportation	Other labors
1939	24.279	5.042	9.479	-	-
1940	35.441	8.069	9.898	-	1.546
1941	32.415	8.942	9.563	-	2.672
1942	78.660	9240	18.130	-	15.290
1943	77.850	17.075	35.350	-	19.455
1944	108.350	30.900	64.807	23.820	151.850
1945	797	229	836	-	8.760
Total	357.792	79.497	148.083	23.820	199.573

Source: Kratoska, Paul H. (ed.). 2015. *Asian Labor in the Wartime Japanese Empire: Unknown Histories*. Oxon: Routledge, page. 95

In 1942 there was a drastic increase in the number of forced labor mobilized from Korea from previous year (see Table 3). This increase coincided with the defeat of Japan in Midway battle by Allied forces. This battle was the turning point of Japan's defeat by Allied forces followed by other defeats. The loss of ships and aircraft suffered by Japan from this battle was enormous. Japan, for the next battle, had to produce ships and aircraft in short time. This was resulted in the increase mobilization of labors from colonies to meet targets. The increase in the number of forced labors continued until 1944. Based on the table, there was sharp increase in all-industrial sectors. This happened in line with the increasing frequency of Japan's defeat in the Pacific War. Some of them were fighting in Saipan and in Philippine Sea.

VI. CONCLUSION

Economic factors were the motive for national general mobilization, which included the mobilization of industrial economic and people's resources. Japan was a country without abundant natural resources and it was the main reason for Japan's expansion to Asia's rich natural resources areas. This factual and ambitious condition resulted in an invasive action and became background to Japan's colonization of Asian countries under the pretext of "emphasizing Asian countries from the stranglehold of Western capitalism and imperialism".

The crisis of capitalism-liberalism in United States became golden opportunity for Japanese ultranationalists to replace liberal democratic government in Japan. The militaristic government and nationalist technocrats finally became the new administrator of the country. Based on this change, the totalitarian-military government began to run with the vision of "building a high-level national defense". This

²⁸MacNamara, Dennis L. (1990). *The Colonial Origins of Korean Enterprises 1910-1945*. Cambridge: Cambridge University Press, hlm. 59

²⁹Kratoska, Paul H. (ed.). 2015. *Asian Labor in the Wartime Japanese Empire: Unknown Histories*. Oxon: Routledge, hlm. 94-95

³⁰Ibid.

concept was then conveyed to public in the name of nationalism. Thus, general mobilization as the root of Japan's war machine in the Pacific War rested on mobilizing national power, namely propaganda and legal instruments in form of General Law of National Mobilization in 1938.

Economic mobilization was important agenda in the mobilization process national that covered all factors needed in production, starting from raw materials, labor, and technology to war equipment. The mobilization of these factors can be seen in the process of Japanese industrialization in its colonies namely Manchuria and Korea as roots of war economy during the period of the Pacific War. This study was important in terms of dark historical perspective of mankind as a lesson that totalitarian state powered by militaristic bureaucrat who established cronyism with corporations and technocrats resulted in massive warfare and casualties among the common people.

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