Revisiting Industrial Policy and the Role of the State

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Abstract

Industrial policy has been a controversial topic since the 1980s. Many economists have become critical of industrial policy. They reason that it as an undue interference of the state in the market. The more uncompromising among them would argue that most public services can be replaced by competitive market mechanisms. However, historical facts are also stubborn in showing that industrial policy had been crucial for many countries to develop and catch-up with more advanced countries. The governments of the U.K., France, the U.S., Germany, and Japan intervened heavily in the management of their economies to support industrialization in the 19th and 20th century. More recently, the Asian Tigers and China have successfully implemented an industrial policy towards technological upgrading, economic growth, and poverty reduction. The issue is therefore not about totally discarding industrial policy but to ask what kind of industrial policy, and what kind of government and government institutions are necessary for the country to catch-up with industrialized and wealthy countries.

In recent years, the emergence of states openly challenging the American-led global order, along with the concomitant intensifying rivalry between states for dominance at the regional or at the global level, has made the reexamination of industrial policy urgent. As economic security issues become intertwined with national security issues and as the policy focus shifts from free-market economics based on the minimal intervention of the state on the free movement of goods, services, and capital, there is a need to reexamine industrial policy within the broader debate on the role of the state in the economy.

Here, as the paper revisits industrial policy and the role of the state, it ponders on the following questions: what the state is, what is the relationship of the state and industrial policy, and what industrial policy should be. The paper initially looks on the theoretical debate surrounding industrial policy. It then looks at the historical outcomes—successes and failures—of industrial policy. Next, the paper looks at the new face of industrial policy within the framework of national innovation system. The paper then looks at the triple helix of academia-industry-government collaboration, which is the underlying structure of national innovation system. Finally, the paper ponders about the state focusing on its role and features while giving attention to the intensifying rivalry between states.

Keywords: *State, Industrial Policy, National Innovation System, Triple Helix of Innovation*
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1. Introduction

Before the 1980s, industrial policy had been widely accepted in both developed and developing countries as a guide for industrial development. Since then, however, industrial policy has become a controversial topic. The 1980s saw the prominence of neoliberal economists along with the rise of Reaganomics and Thatcherism in the United States and United Kingdom. They argued that industrial policy is an undue interference of the state. As they pushed for global capitalism under American hegemony, free-market economics became the guide as well as the norm that shaped the economic order. The free movement of goods, services, and capital across borders with minimal government intervention became the ideal engine of global economic growth.

Global capitalism advanced through the export of American capital and attendant technology. Their export to authoritarian states was justified politically by arguing that these would be transformed eventually into liberal democratic states as their peoples seek political freedoms when they become wealthy. While these states have strengthened their economies as they took advantage of economic freedoms provided by global capitalism, they have remained authoritarian and have continued to view the United States as an adversary.

After decades of advancing global capitalism, Pax Americana—i.e., a global order under American economic and military dominance—is being seriously challenged. The United States military's ability to prevail in multiple and simultaneous contingencies is being brought into question and becoming less certain. It is being pointed out that the US government has been facing serious fiscal challenges that affect the expansion of its military budget to respond to the military expansion of rival countries. Furthermore, it is being pointed out that the American economy, which is the tax base that supports the US military, is declining in weight relative to those of ascendant countries. Lastly, it is being pointed out that the United States has a weakened industrial base—due to the transfer of manufacturing sites overseas—and in the face of a turbulent geopolitical reality, its capacity to produce and develop effective military materiel in subduing rivals has become less certain.

A weakening Pax Americana is giving rise to new geopolitical and security realities. In Europe, Russia has invaded Ukraine. In the Middle East, the long-standing rivalry between Iran and Saudi Arabia has spilled into a proxy-war in Yemen. In Asia, the rivalry between China and India has resulted to military skirmishes resulting to casualties in border areas that are subject to territorial dispute. To the east, North Korea continuously conducts nuclear tests and fires off intercontinental ballistic missiles that could threaten the United States. China is stepping up with its rhetoric and military posture against Taiwan, and Chinese invasion of Taiwan is becoming more imminent.

International institutions supporting the global political order are being ignored by ascendant countries when their core national interests are involved. For instance, the Permanent Court of Arbitration (PCA) in 2016 made a ruling that historic rights have been replaced by UNCLOS, thereby invalidating China's assertion on its historic rights over South China Sea. Despite this, China reinforced its claim diplomatically and militarily.

A weakening Pax Americana is placing the American-led global capitalism under doubt. For instance, while Indo-Pacific is being stressed as free and open by the United States and its allies to underline the free movement of goods between countries, China is adamant on its sovereignty over South China Sea that in effect Balkanizing the region. Its military continues to challenge the passage of warplanes and warships of the United States and its allies.

Pax Americana, because it is weakening, was not able to dissuade Russia from invading Ukraine, and this has shaken global capitalism. To restore the global political order that respects Ukraine's sovereignty and territorial integrity, the United States and its allies are imposing economic sanctions on Russia to weaken its economic base with the intention of weakening its military. But these sanctions—such as import bans on Russian oil and SWIFT ban on several Russian financial institutions—have serious consequences on global capitalism. The import bans on Russian oil have hurt the German economy—the largest economy in Europe—with high energy prices that drag its industries. Since German dependence on Russian gas is expected to continue for several more years, Russia continues to have a leverage against the major European economy, and the non-settlement of war will continue to drag down the European economy. On the other hand, the SWIFT ban impedes the targeted banks from executing international trade and financial transactions for their customers, making a major impact on the Russian economy. However, it is also giving an opening for CIPS—China's payment platform that could rival SWIFT—to be used by Russia for cross-border financial platform. As the SWIFT ban impedes the free flow of goods and services across countries and curbs the use of US dollar for cross-border transactions, it risks a permanent damage to the American-led global economic and financial integration.

The direct challenge against American economic leadership has been brewing a long time. Ascendant countries want more influence in the global economic order, and they have been cooperating to strengthen their positions vis-à-vis the United States. For instance, BRICS countries declared they want more voice in the operations of IMF/WB in their Delhi Declaration of 2012. They further agreed to promote the use of their local currencies in settling cross-border payments and financing investment projects. In effect, they are challenging American and European leadership in IMF/WB and opposing the US dollar being used as the key international currency.

Economic disputes are becoming more open and more intense because of national security and strategic outlook. Economic security has become closely intertwined with national security. For example, China's restriction of exports of rare earth metals to Japan in 2010 is seen as an offshoot of the two countries' territorial conflict over the Senkaku/Diaoyu Islands. The rise of China and its ambition in the global arena is inducing the United States to make countermeasures. For example, it launched a policy in 2012 to pivot to East Asia wherein more of its diplomatic, military, and diplomatic resources are redirected to the region. It accelerated the policy to counter China by launching a trade war in 2018 and by seeking to prevent American technology to be transferred to China. To boost its competitiveness against China, the United States enacted the CHIPS and Science Act that would promote domestic production and development of semiconductors. Furthermore, the United States, Japan, and South Korea reaffirm their cooperation on economic security in the face of a rising China.

The United States which had been instrumental in advancing a global capitalism based on free-market economics has become more open to industrial policy. For instance, Senator Rubio of the Republican Party asserted in 2021 that "in those instances in which the market's most efficient outcome is one that's bad for our people, for our national security, for our national interest, … what [the United States] need is targeted industrial policy to further the common good and to protect our people, our country, and our future."

The emergence of states openly challenging the American-led global order, and the concomitant intensifying rivalry between states for dominance at the regional or at the global level have made urgent the reexamination of industrial policy. As economic security issues become pressing and as the policy focus shifts from free-market economics based on the minimal intervention of the state on the free movement of goods, services, and capital, there is a need to reexamine industrial policy within the broader debate on the role of the state in the economy.

Here, as the paper revisits industrial policy and the role of the state, it intends to ponder on the following questions: what the state is, what is the relationship of the state and industrial policy, and what industrial policy should be. The paper initially looks on the theoretical debate surrounding industrial policy. It then looks at the historical outcomes—successes and failures—of industrial policy. Next, the paper looks at the new face of industrial policy within the framework of national innovation system, and the triple helix of academia-industry-government collaboration as the underlying structure of national innovation system. Finally, the paper ponders about the state focusing on its role and features while giving attention to the intensifying rivalry between states.

2. Theoretical Debate on Industrial Policy

Neoliberal economists are often critical of industrial policy because they consider it as an undue state interference in the market (Browne 2012). Neoliberal theories use the justification that “human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade” (Harvey 2005: p.2). They argue that the role of the state should be limited to the role in producing and reproducing this institutional framework.

The narrow definition of industrial policy would be the state’s effort to transform the structure of production that would encourage specific industries that it sees as having better prospects to accelerate economic growth (e.g., Noland and Pack 2003). It is further pointed out that industrial policy applies not only to the manufacturing sector, but also to agricultural and service sectors (Rodrik 2007, Noman and Stiglitz 2012).

There are currently two strands of thought that is shaping the debate: the strand according to neoclassical economics, and the strand according to the institutionalist perspective.

Neoclassical economics is the economics of the mainstream (Hausman 1992), i.e., the generally accepted methodology in analyzing an economic phenomenon. It has three fundamental premises: methodological individualism, methodological instrumentalism, and methodological equilibration [1] (Arnsperger and Varoufakis 2006). According to neoclassical economics, economic growth originates from the macroeconomic focus on capital accumulation and labor supply. Solow’s (1956) exogenous model is a prominent theory that assert this. However, the oil shocks and stagflation in the 1970s urged neoclassical economists to reconsider economic crises. A theoretical outcome was the inclusion of endogenous factors to the economic growth model. These factors are technological capital (Romer 1986, 1990) and human capital (Lucas 1988). Furthermore, Barro (1991), and Barro and Lee (1993) showed the importance of endogenous factors that are country specific.

Under neoclassical economics, there are two major approaches on industrial policy: the laissez faire approach and the market failure approach.

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[1] Methodological individualism is the principle that a socioeconomic phenomenon should be explained based on the individual acts of choice. On the other hand, methodological instrumentalism is the principle that actions are instruments to maximize preference. Lastly, methodological equilibration is the principle that instrumentalist actions of individuals are coordinated in a way that their aggregation happens and is regular so that their prediction is possible at the macro-level.

The laissez faire approach mostly being advanced by neoliberal[2] economists would argue that there is no need for industrial policy because the market is the most effective mechanism in allocating resources. According to this perspective, one can conclude that the market appropriately allocates resources to the correct sectors and firms for the country. The proponents are critical of industrial policy because they consider it as an undue interference of the state in the market (Browne 2012). The more neoliberal among them would further advocate for a policy in which most public services would be replaced so that these services would be using competitive market mechanisms. They argue that state intervention in a modern economy is destined to fail because of the presence of high informational costs and high uncertainty (Chang 2002). A justification comes from an apparent inherency of government failure. According to the justification, the government continues to remain at risk for being captured by politically influential groups that advance their narrow interests resulting in inefficiencies in allocating resources (Chang 2002). The Hayekian idea of a spontaneous order in market economies—wherein resources are spontaneously allocated—is used as a crutch to justify that government is mostly not needed and therefore mistaken (Chang 2002).

The other major approach under neoclassical economics is market failure. Market failure argues that the state is important to facilitate the private sector's ability in exploiting the country's comparative advantage based on its endowment structure (Lin and Chang 2007). According to this approach, state intervention such as through an industrial policy is justified to correct market failure caused by information externalities and co-ordination problems (Lin and Chang 2007), and to guarantee the supply of public goods (Peres and Primi 2009). It argues for a stance that considers both the likelihood of government failure and market failure (Peres and Primi 2009).

Another strand of thought about industrial policy comes from the institutional economic perspective. This strand argues for the state to overcome current comparative advantage and invest in higher-productive industries whose competitiveness can only be found in the long-term (Lin and Chang 2007), and this could be done through an industrial policy. It contends that poor-countries are poor because they could not develop nor use technologies that rich countries could (Lin and Chang 2007). It stresses that factors of production such as capital and labor do not accumulate in abstract forms. For example, workers and technicians (and machineries) in the cement industry cannot be converted overnight into workers and technicians (and machineries) in the semiconductor industry. The strand argues that the state needs to prioritize the accumulation of capacities and knowledge in specific industries (Peres and Primi 2009). The question of underdevelopment does not only concern market failure, but also the absence of markets within the state (Austin 2009), i.e., the institutions necessary for development. North (1990) further argues that institutions (e.g., as firms or as states) could act as intermediaries in internalizing costs that rise in conflicts.

Under an institutional economic perspective, firms are viewed as entities in which contracts are organized (Williamson 1975, 1985, Williamson, Winter, and Coase 1991, Alchian and Demetz 1972) or in which behavior is routinized (Nelson and Winter 1982). Various research such as by Teece, Rumelt, Dosi, and Winter (1994), and Dosi and Marengo (1994) have argued that the growth of firms is contingent with learning and accumulation of knowledge. Monopoly and monopolistic behavior are seen as impediments

[2] Rapley (2004) understands neoliberalism as the fusion of neoclassical economic theory with neoclassical liberal political thought. Neoliberalism can be understood as a political-economic project justified by the notion that "human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private rights, free markets, and free trade" (Harvey 2005: p.2).

to structural change. For this, industrial policy is seen as an instrument to promote learning and accumulation of knowledge by firms, and avert monopoly and monopolistic behavior.

2.1 Historical Outcomes of Industrial Policy

History has shown many cases in which countries failed with their industrial policies and remained poor or in which their economies collapsed. This is clear with centrally planned economies such as the Soviet Union and countries in Eastern Europe wherein they failed clearly and collapsed severely. Moderate state intervention through import-substitution industrialization[3] (ISI) in the 1950s to 1960s generated industrial development and economic growth in the beginning but eventually failed to make them sustainable (Altenburg 2011). Under ISI, the targeted industries remained uncompetitive. The industrial policies were inappropriate and wasted enormous amounts of resources such as in subsidies in failed projects as specific interest groups—such as cronies and corrupted government officials—captured the benefits that accrue from these policies. Coupled with this, the political and civil repression in developmentalist but authoritarian states have led many people to suffer severely resulting for them to have a deep mistrust of the state.

As their economies stagnated and economic problems worsened, many governments withdrew from active intervention in the economy in the 1980s to improve their fiscal situation as external debt exploded due to chronic balance of payments crises. Furthermore, they were under pressure to withdraw from active intervention in the economy from structural adjustment programs initiated by the IMF and the World Bank as they promote free-market economics. Because of these, many governments could not but delegate more to private enterprises for economic development and aligned their development policies towards trade liberalization, privatization, and deregulation.

Yet some historical facts are also stubborn in showing that industrial policy had been essential for countries to develop and catch-up with more advanced countries. The governments of the U.K., France, the U.S. Germany, and Japan intervened actively in the management of the economy to support industrialization during the 19th and 20th centuries (Landes 1969, Johnson 1982). For instance, shipbuilding was developed in 17th century England consequently in part of the Navigation Acts that was passed to require that all goods brought in and out of the country be transported by English ships and crews. Prussia (present-day Germany) implemented a policy to promote new industries and education for the diffusion of new technologies (Landes 1969). In France, the government promoted the creation of banks and investment in railway and infrastructure. In the United States, the federal government intervened in guaranteeing the rules in the

[3] The 1950s saw the maturation of the theory of balanced development through the research of Nurske (1953) and Lewis (1954). This theory argued that the growth process is contingent with the capacity to balance the sectors harmoniously and to avoid disequilibria between supply and demand in the economy. Economic growth is driven by the demand mostly from the state. Import controls would have to be in-place so that the demand would be satisfied by local firms and not by the productive capacities of other countries. These ideas are close to the ideas of John Stuart Mill of the United Kingdom and Friedrich List of Germany. Under this general framework, Myrdal (1968) was for government intervention in poor countries for them to develop as an outcome of allowing the importation of capital goods and restricting importation of consumer goods. These ideas developed into the policy of import-substitution industrialization (ISI) that was popular and implemented in the 1950s in many developing countries. The policy put in place measures that protected local firms producing goods that were being imported at high-volume. It was a policy to advance industrialization through the promotion of self-sufficiency in the manufacturing sector. The goal was to establish domestic manufacturing facilities to overcome the country's interdependence with developed countries based on exporting raw material in exchange of importing manufactured products.

market as well as sustaining demand through structural investments and military spending. In Japan during the Meiji period, the government created and built fundamental public infrastructure such as postal service and railroads and created the industries that were necessary for industrialization such as iron foundries and cotton mills.

Post-World War II saw the economic rise of the Asian Tigers, namely South Korea and Taiwan. These countries actively used industrial policy towards technological upgrading, economic growth, and poverty reduction; and did not strictly abide by the market-logic approach—including trade liberalization, privatization, and deregulation—of the Washington Consensus (Altenburg 2011, Williamson 1990). Most recently, China has become the most dynamic economy as its government intervened heavily to create institutional arrangements for effective interactions between the public and private sectors.

What history is telling us is not to throw the baby out with the bathwater. The successful implementation of industrial policy in these countries allowing them to catch-up should be a convincing argument against the outright rejection of industrial policy and adoption of market fundamentalism. At the same time, since cases of industrial policy had also caused massive waste of limited resources in many countries, the question focuses on how to design and implement industrial policies for them to become effective according to the specific contexts of a country.

2.2 National innovation system

As global capitalism advanced through trade and investment liberalization in the 1980s and institutionalization of strong intellectual property rights in the 1990s, companies in developed countries focused more on the production of intellectual property such as patent rights through research and development, and transferred their manufacturing sites to low-wage countries. As this progressed, developed countries shifted their focus from industrial manufacturing systems to innovation systems, and research and technological development have become the heart of industrialization at least for developed countries. Industrial policy has taken a new face within the framework of national innovation system in which the public sector is an important component (Soete 2007). The thrust of industrial policy within the framework is found in nurturing and stimulating innovation in the country.

The term “national innovation system” was coined by Freeman (1987) to describe the institutional networks covering “private and public sectors whose activities and interactions initiate, import, modify and diffuse new technologies” (Freeman 1987). In his previous research (Freeman 1979), he argued that innovation occurs in the ever-changing interface between science, technology, and markets. Lundvall (1988) added that there is an interdependency between production and innovation. In the modern economy, the most fundamental resource is knowledge, and the most important process is learning (Lundvall 1992).

The national innovation system encompasses “the elements and relationships which interact in the production and use of new, and economically useful, knowledge … and are either located within or rooted inside the borders of a nation state” (Lundvall 1992). It includes firms, government, universities, research institutions, factor endowments, financial systems, policies, historical and cultural backgrounds. While it has many elements, the state is responsible through its industrial policy for maintaining the good operation of the innovation system through policies such as intellectual property rights, creating the missing components of the innovation system, and correcting errors that may arise in cooperation and development among the various elements.

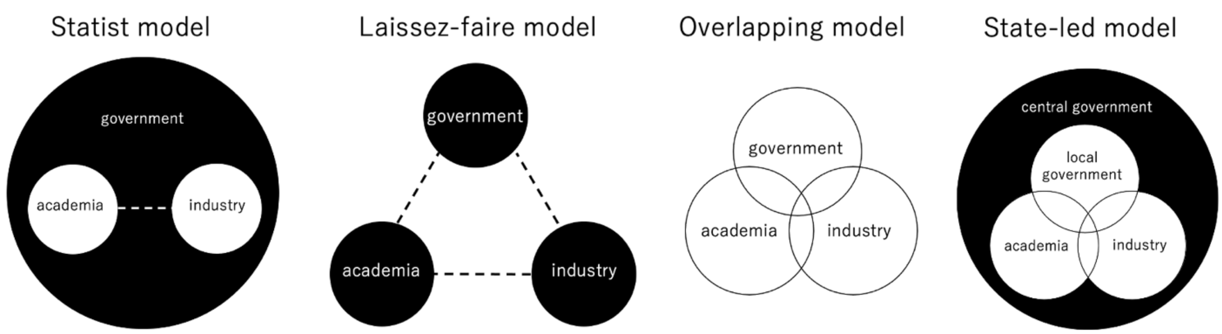
2.3 Triple helix model of innovation

Effective collaboration among academia, industry, and government has an important role in promoting the flow of knowledge, technology, and capital. This accelerates the transformation of scientific and technological results and improves the technological innovation capacity of the state. At the same time, this can result in the creation of new industries. For this, the triple helix collaboration of academia-industry-government is an important part of the country's national innovation system. According to Leydesdorff and Zawdie (2010), it is the underlying structure of the innovation system. The helix suggests three sub-dynamics of innovation: the economic dynamics of the market, the dynamics of political control, and the cognitive dynamics of knowledge production (Leydesdorff and Zawdie, 2010).

More concretely speaking, industry-academia-government collaboration refers to a series of collaboration activities in research and development, commercialization, business establishment, and industrialization. It can come in the forms of joint research and technology transfer and the practical application of technology in the marketplace.

There are four models of collaboration that has evolved from two opposing positions of either statist or laissez-faire initiatives (Cai and Liu 2015). In the statist model (see Figure 1), the government manages both "academia" and "industry" and takes the lead for projects such as technological development and new product development. The former Soviet Union is cited as a statist model (Cai and Liu 2015).

Figure 1: Models of triple helix interactions



Source: Adapted from Cai and Liu (2015), p. 4

On the other hand, in the laissez faire model (see Figure 1), the government, academia, and industry are separated from each other and act independently. Market fundamentalists often see this relationship as ideal. In recent years as competition between states has become intense, there has been a shift toward an overlapping model, in which the boundaries between the three overlap (Cai and Liu 2015). In the overlapping model (see Figure 1), academia is closely connected to industry and educational and research activities are supposed to be integrated into the development of the knowledge economy. For example, universities are supposed to form direct links with industry and pursue the business application of knowledge (Cai and Liu 2015). On the other hand, the government is supposed to provide targets and incentives to promote linkages between universities and research institutions with private firms. Lastly, the state-led model, which has evolved in China, refers to the collaboration that happen among local government, academia, and industry based on the dominance of the central government. Hence, the triple helix has become a hybrid of the statist and the overlapping models (Figure 1). The state-led model evolved as an outcome of China's adoption of a market economy through economic reforms beginning in 1978 while affirming one party rule such as through the idea of socialist market economy that was adopted in 1992.

3. The Nature and Role of the State

The debate on industrial policy leads to the more fundamental question on the nature and the role of the state.

One of the first proponents of industrial policy is Friedrich List (1789-1846). He challenged and broke away from the classical economic theories of David Ricardo (1772-1823). His thesis is to place the state, as opposed to the individual, as the force of rapid economic development. His ideas were driven by British economic dominance at the time and by the aspiration for his native Germany to catch-up.

The core of his arguments is that it is only the state that can harness the collective knowledge and resources for rapid economic development. He concludes that it is only through the state becoming the driver of economic development that can allow less developed countries to catch-up with more developed ones. Quotes attributed to List on inter-state competition and the role of the state in the economy, include: "England's national economy … has its object … to monopolize all manufacturing power, to keep the world … in a state of infancy and vassalage by political management as well as by the superiority of her capital … and her navy" (List 1827). "Government has not only the right, but it is its duty, to promote everything which may increase the wealth and power of the nation, if this object cannot be affected by individuals" (Earle 1986).

The paper proposes the following outline in understanding the state.

The Treaty of Westphalia of 1648 has shaped the international order based on the nation-state. While the reality is far complicated, at the core of this order, the nation-states mutually recognize each other's power on their territory and people. From this order, the state has two elements under its power: territory and people. Adapting Rousseau's (2010) idea of the social contract, state responsibility is to protect and safeguard its people and territory. Complementary to this, state power comes from its ability to mobilize the people and the territory. The way the state governs and regulates the two elements determines its viability, survival, and ability for expansion.

The paper frames the state to be sustained and propelled by three engines. These are authority, economy, and ideology. Here, the authority is the structure and the mechanism that exerts influence on and compels people to do things they would otherwise not do. Legitimate power enlists people for state service, and appropriate and allocate land and resources. This includes the ability to appropriate private property such as through taxation (North 1981). Development of both the legal and military infrastructure strengthens the state's authority. On the other hand, the economy is the production, consumption and distribution of goods and services for the reproduction and/or expansion of the state. Development of the people through health and education policies, and the territory through fixed investments such as infrastructure and productive facilities strengthens the state's economy. Lastly, ideology here is the subjective perspective and understanding of the world (North 1990) that serves as an intellectual and aesthetic framework, and behavioral guide for the people. Ideology serves as the guide for the self-regulation and conduct of the people as individuals and as members of a group. The state promotes ideology through its educational system, its ability to drive the media through incentives and censorship to influence mass culture, and other similar elements. The regulation of people is made under two environments (North 1990). One is through a formal environment in which the acceptable form of the human relationships is regulated through explicit rules and regulations (such as through the constitution, laws, and ordinances). The other one is through an informal environment in which the acceptable form of human relationships is regulated through implicit rules embedded in the social norms.

State power has two facets: defensive power and expansive power. Defensive power is the state's ability to secure, sustain and reproduce the people and the territory that are currently under its power. Expansive power is the ability to develop and enlarge the people and the territory under the scope of its influence.

Increase in defensive state power comes from the reduction of rivals' abilities to impose their influence on and mobilize the said state's people and territory. Defensive state power also increases through appropriation and defeat of antagonistic and contesting groups within the state's territory such as secessionist movements and criminal organizations. Conversely, defensive power decreases when rivals become more influential on the state's people and territory. The rivals can be other states or internal groups that usurp state power. The ability of internal rival groups to usurp power increases when the state is inadequate in the performance of its responsibilities to the people.

The international order is stabilized through the mutual recognition of state sovereignty in which states do not and cannot interfere with the internal affairs of others. However, the reality is not this simple. Without adequate power, the state is vulnerable to become subordinate to others. Since state power is contingent on the elements of people and territory, its magnitude is an outcome of how the state secures, sustains, and develops and expands these. State power is about its ability to impose its authority, to produce wealth and to make its ideology attractive. Under a competitive international environment, it becomes imperative for the state to develop the people and the territory to become more productive economically and more effective in terms of authority and ideology.

On the other hand, the expansive power of a state increases either when more territory and more people become subordinated under its influence for mobilization.

At the risk of oversimplification because the reality is far more complicated, the following is a description of ways of projecting state power. On authority, strong states strengthen their military capability to increase their ability to compel states and non-state actors through the direct use or through the threat of force to do things that they would not otherwise do. These states lead in establishing and managing international regimes to compel others to act accordingly. On economy, strong states mobilize the human and natural resources of other states to fortify and strengthen their power through trade and investments. They acquire the necessary labor power and intellectual capital from overseas through the entry of foreign workers both low skilled and high skilled, thereby externalizing the cost of producing human capital. Weak states send their people overseas when they cannot provide adequate sustenance and opportunities. On ideology, strong states transmit ideas overseas, and influence their intellect, aesthetics, and behavior. If they are successful, they can indirectly mobilize people from other countries. They can transmit their ideology through the export of pop culture such as movies and songs, and the education of the influential class of other countries.

Ultimately, state power comes from the ability to secure, sustain, reproduce, develop, and expand human resource (i.e., people), and natural resource (i.e., territory) that can be utilized for mobilization to increase the state's authority, economy, and ideology.

Risks are always present for states to be expansionary towards others in terms of authority, economy, and ideology. Other states and even antagonistic subnational organizations can threaten the territorial integrity and authority on the people. Under this, states have the motivation to fortify their power.

4. The Sate and Industrial Policy

Here, industrial policy is seen as the use of government power to develop and administer policies relating to the economic structure to realize state goals; fundamental of which is the safeguard the state's people and territory. And under an international environment of constant pursuit for power by other states, one would have to include the development of its territory and people. Corollary to this, the industrial and economic structure would be transformed to reflect the requirements and development of the people and territory.

The state has four types of activities to intervene with regards to industrial policy (Peres and Primi 2009, Reinert 2007). One: Regulator, i.e., it regulates the production and consumption levels for specific industries by setting tariffs or quantitative outputs, or by giving fiscal incentives or subsidies. Two: Producer, i.e., it participates in producing for the economy such as through state-owned enterprises. Three: Consumer, it purchases from the economy thereby creating a market for specific industries. Four: Financial Agent and Investor, i.e., it allocates public and private financial resources by intervening in the financial market such as the credit market. Furthermore, there are five benchmarks to evaluate the strategy for industrial policy: the criteria in targeting the industrial sector; the choices and combination of policy instruments for each objective; the limits due to endogenous capabilities; the political will and institutional capacity to implement the strategy; and the financial capability to sustain the strategy (Peres and Primi 2009). The policy mix is difficult to make and implement. The success of the policy mix design and implementation is very much dependent on state capacity and capability. Here, the role and the capacity of the government, which is the state machinery tasked for the realization of its responsibilities and enhancing its power within and outside its territory and people, is very important.

States are under constant competition in pursuit of power and influence. An economic decline or stagnation would weaken or stagnate state power. Under this circumstance, the state would not be able to sustain its ability to impose authority (including the appropriation of private property such as taxation), and to shape ideology. From this perspective, the state is required to adopt an industrial policy that would develop industries that would enhance the economy. Failure would risk it to become a subordinate of or subservient to other countries in terms of authority, economy, and ideology.

Since state resources are limited, the allocation must reflect the weights of different national interests. At the same time, the limited resources must be directed in and focused on specific industries that would advance state power.

Common industrial policies are policies that directly influence and alter the production structure such as: credit below-market interest rates, subsidized electricity rates, research and development subsidies, regulation of the entry and exit of firms, export targets, and differentiated tariffs and nontariff barriers (Noland and Pack 2003). In contrast to this, the paper points out that the economy in general and industries cannot be insulated from the wider dynamics of the society. Any government policy that would indirectly benefit specific industries would be understood as industrial policy. Human resource development being implemented under the education policy, transformation of mass culture under communications policy, and other laws would indirectly influence the trajectory of industries and therefore the industrial structure.

Economic development comes along not only with changes in the industrial or economic structure. It also comes with structural changes in the society in terms of political, economic, and cultural institutions (e.g., labor shifts to higher productivity sectors or married women entering the workforce). For this, the sustainability of economic development is premised on the success in the smooth delivery of new institutions without social chaos.

4.1 Responsibility of the state and industrial policy in an era of conflicts

A successful industrial policy leads to industrial transformation, which in turn involves a societal paradigm shift. It is the use of government power to develop and administer policies that prioritize specific industries to realize state goals, fundamental of which is the safeguard and development of its people and territory. The economic structure is to be transformed to reflect the needs of the people and territory. Under this, industrial policy is to be aligned with the national interests including security interests, and health and education of the people. The importance of this lies in the fact that it is an instrument of the state to fulfill its responsibilities to protect and develop its territory and people.

The goal of industrial policy is the development of specific industries that responds to the needs and the aspirations that are specific to the country. For instance, countries must focus on the development in the long-term of the necessary industries that address prevalent illnesses and their causes. Furthermore, the answers to needs and aspirations require specific solutions in terms of design, strategy, and implementation. As Browne (2012) asserts, "industrial policy is at the heart of all country development strategies."

Industrial policy must address and develop the three bases of state power: authority, economy, and ideology. Furthermore, the paper puts forward the fulfillment of the state's role in protecting and developing its territory and people as the main goal of industrial policy.

For example, a country's need to safeguard its territory and people requires a capability to impose its authority. A major component of its authority is its military power. In this regard, no country has been able to become "a major military power without being a major manufacturing power" (Lind 2012: p. 464). To further illustrate, to develop the industry necessary in the national security or in territorial integrity, it is necessary to recognize the country's geography in formulating industrial policy. An archipelagic country, for example such as Indonesia, connecting the people and the territory for nation-building and protection of the territory requires the production and use of ships specific to the country's needs.

Safeguarding the people is not only against other expansionist states, but it also includes safeguarding from natural disasters and diseases. In this regard, industrial policy must also be directed towards industries that promote the general health and welfare of the people. For instance, the industrial policy must promote industries necessary in building the infrastructure that improve people's health such as sewerage and sanitation.

Industrial policy must also promote the economy with the aim of increasing productivity and creating employment. It would need to identify strategic industries based on these two main considerations. Productivity would increase only through the development of the people and the territory. More concretely speaking, productivity increases would result through human capital development, physical infrastructure development, and institutional arrangements that coordinate and harmonize these developments. Employment is another important basis in choosing strategic industries to develop. The importance of employment is not limited to economic production. Employment is necessary in nation-building. It is also important in the regulation of the society for peace and order because it provides another hierarchal structure that allows the monitoring and supervision of the people to maintain harmony in the society. Hence, monitoring and supervision by the state infrastructure such as the law enforcement agencies is actually complemented by entities involved in economic production. Furthermore, the people's energy would be absorbed into the productive process rather than be diverted to illegal and asocial behavior.

Economic activities have become more social. Individuals must transact with other individuals such as in large production units or in exchange of information. The benefits of economies of scale or economies of scope would be realized by limiting transaction costs (North 1981). Education must be geared towards lowering transaction costs in the society. Improving the communicative and linguistic abilities in spoken and written forms is important for transaction costs to be lowered. It is necessary to evaluate the educational policy based on this viewpoint. Lastly, the success of industrial policy relates to the ability and skill of the workforce. The ability and the skill of the workforce must be aligned with the requirements of the industrial policy. The importance of education cannot be devalued for the success of any industrial policy. Moreover, economic development and concomitant industrial restructuring are forms of societal and institutional changes. Their foundation is therefore the ability of the people to adapt to these changes. For this reason, for economic development to proceed, it is necessary for the people to learn continuously. Education is therefore at the foundation of economic development and for any kind of development. The development of the country can happen only with continuous education. The development of an ideology that exalts education and continuous learning is necessary in an era of continuous innovation.

5. Conclusion

Global capitalism advanced under American hegemony, in which free-market economics became the guide as well as the norm that shaped the economic order. The free movement of goods, services, and capital across borders with minimal government intervention became the engine of global economic growth. Global capitalism brought about the emergence of states that challenge American hegemony. Under an intensifying rivalry between states, industrial policy, which had become a controversial topic in the 1980s, reemerged as an important topic for national and economic security.

In the 1980s, neoliberalism became a dominant ideology in policy making, and in advancing economic globalization. The neoliberal ideology argues that the role of the state should be limited to the role in producing and reproducing a framework characterized by strong private property rights, free markets, and free trade. According to this ideology, the market appropriately allocates resources to the correct sectors and firms in the country, and therefore there is no need for industrial policy because the state intervenes in the proper functioning of the market. It further advances the notion of the eventuality of failure of government intervention in the economy due to the presence of influential groups that seek to capture the government to advance their narrow interests including their business interests resulting in inefficiencies in allocating resources. The failure of policies of import-substitution industrialization in the 1950s and the 1960s, and the collapse of centrally planned economies including Soviet Union and countries in Eastern Europe have been used to justify that active intervention of the state is not workable. Furthermore, the political and civil repression in developmentalist but authoritarian states have convinced people to mistrust the state including its intervention in the economy.

On the other hand, there are also theoretical arguments that support industrial policy. For instance, according to the market failure argument, state intervention is the way to correct allocation problems brought by information externalities and coordination problems. Another strand of thought is from an institutional economic perspective. State intervention through industrial policy is a way to transform the economic structure and comparative advantage towards strategic industries. Those arguing for industrial policy have pointed out that history has shown that many countries were able to industrialize through active government intervention in the economy including the U.K., France, the U.S., Germany, and Japan. Furthermore, it is being pointed out that Asian Tigers and China have successfully implemented an industrial policy towards technological upgrading, economic growth, and poverty reduction.

Industrial policy can therefore be successful or be a failure. The issue is therefore about how to design and implement an industrial policy to become effective in a particular country.

As global capitalism advanced through trade and investment liberalization since the 1980s and through institutionalization of strong property rights since the 1990s, industrial policy has taken a new face within the framework of national innovation system in which the government is an important component. The thrust of industrial policy within this framework is found in nurturing and stimulating innovation. The triple helix of academia-industry-government plays an important part in the national innovation system through the flow of knowledge, technology, and capital.

The paper reaffirms the state's responsibility in protecting and safeguarding its territory and people. It further argues that the way the state governs and regulates the two elements of territory and people determines its viability, survival, and ability for expansion. The paper argues that the state is sustained and propelled by authority, economy, and ideology. The paper proposes the understanding of authority as the structure and mechanism that exerts influence on and compels people to do things they would otherwise not do. The development of both the legal and military infrastructure strengthens authority. On the other hand, the paper proposes an understanding of economy as the production, consumption and distribution of goods and services for the reproduction and/or expansion of the state. The development of the people through improvement of health and education, and of the territory through investments in infrastructure and productive facilities strengthens the state's economy. Lastly, the paper proposes an understanding of ideology as the understanding of the world that serves an intellectual and aesthetic framework, and behavioral guide for the people. The state promotes ideology through its educational system, and through its ability to drive culture in part through the media.

The projection of state power is done through authority, economy, and ideology. On authority, strong states strengthen their military capability to increase their ability to compel states and non-state actors through the direct use or through the threat of force to do things that they would not otherwise do. These states lead in establishing and managing international regimes to compel others to act accordingly. On economy, strong states, through trade and investments, mobilize the human and natural resources of other states to fortify and strengthen their power. They acquire the necessary labor power and intellectual capital from overseas through the entry of foreign workers both low skilled and high skilled, thereby externalizing the cost of producing human capital. Weak states send their people overseas when they cannot provide adequate sustenance and opportunities to their people. On ideology, strong states transmit ideas overseas, and influence their intellect, aesthetics, and behavior. If they are successful, they can indirectly mobilize other people. They can transmit their ideology through the export of mass culture such as movies and songs, and the education of the influential class of other countries.

The paper proposes that industrial policy is seen as the use of government power to develop and administer policies relating to the industrial structure to realize state's role of safeguarding and developing its people and territory. Industrial policy must address and develop the three bases of state power: authority, economy, and ideology. Under an intensifying competition between states, industrial policy must address how to strengthen its authority to protect its people and territory. Industrial policy must promote human development and increase its economic capacity to improve human welfare and sustain and develop its territory. Industrial policy also involves making ideology more attractive to people, and at the same time developing an ideology that value continuous education.

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