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A COMPARATIVE STUDY OF KOREAN AND JAPANESE INDUSTRIAL POLICIES THROUGH CONTENT ANALYSIS OF OFFICIAL DOCUMENTS

DONG-SUNG CHO, DONG-HYUN LEE, SI-JIN RYU, DAE-WHAN CHO AND DONG-JAE KIM

Abstract

Although industrial policy plays an important role in the process of economic development, only a small number of empirical studies have been developed on this considerable subject. By analyzing Korean and Japanese official documents, which describe government objectives and strategies, this paper identifies the characteristics of Korean and Japanese industrial policies. Both countries' industrial policies have similarities in terms of explicit objectives, but they differ in processes of development and implementation.

1. Introduction

Although industrial policy plays an important role in the process of economic development, there have been few empirical studies focusing on the subject of industrial policy. The term 'industrial policy' itself was not widespread in Western countries until the mid-1970s. Even in Japan, the so-called mecca of industrial policy, 'industrial policy' was classified as a Japan-specific proper noun rather than as a subject of academic research.

Since the economies of Western developed countries were capitalistic economies, the role played by the government was limited. For that reason, there was little recognition of industrial policy in their economic development. Neo-classical economists purported that even in circumstances where the government needed to play an active role to ensure stability and development of the national economy, government policy should be strictly limited to macro-economic policies such as total demand control. In addition, microeconomic policies which induced future imbalance and distortion of the economy by stimulating or depressing specific activities were also discouraged (Lee, 1991).

Therefore, industrial policy was ignored from the main areas of concern in the economy. This absence can be attributed to the fundamental differences between the view of the neo-classical economists, which emphasizes a weak government and the market mechanism, and the basic attributes of industrial policy, which emphasizes active intermediation on resource allocation by the government.
However, in the early 1980s, interest in industrial policy began growing in advanced or developing countries because of continuing depression in the economies of developed countries, rapid economic growth of Japan and the successful economic development of developing countries initiated by government.

More importantly however, it was the phenomenal economic growth of Japan that helped spread the discussion of industrial policy and its usefulness worldwide and among scholars (Johnson, 1984; Thompson, 1989).

Korea is one country in which Japanese industrial policy has been successfully adapted. Indeed, Korea's rapid transformation beginning in the 1960s, from an underdeveloped country into a semi-developed country, has often been attributed to its industrial policies (KIET, 1989).

Even though industrial policy has played a major role in the economic development of both Korea and Japan in the last thirty years, there has been lack of theoretical and empirical research on the subject. This paper is a longitudinal analysis on the contents of Korea's and Japan's industrial policies. It attempts to investigate the following research questions: First, what are similarities and differences between Korean and Japanese industrial policies? Second, what are the implications for the government and policy-makers regarding an effective industrial policy? This study should set the foundation for more systematic studies in the area of industrial policy.

2. Theoretical Background

2.1. Definition of Industrial Policy

Due to the relative infancy of the field of industrial policy, an established theory of industrial policy has not yet been formulated. However, some conceptual characteristics can be drawn from previous research; these characteristics form the basis of our discussion (Leone and Bradley, 1981; Reich, 1982; Scott, 1982; Lodge and Glass, 1983). (See Table 1)

First, industrial policy is a supply-side economic policy that emphasizes supply expansion rather than demand control. This contrasts Keynesian total demand control, which manages total demand by fiscal or monetary measures with short-term economic stability as the primary goal.

Second, industrial policy focuses on allocation rather than formation of capital (Reich, 1982). Factors of production are comprised of labor, capital and management. To develop an industry, not only the formation of each factor but also effective allocation between economic sectors is very important. Formation in labor supply or capital accumulation is basically influenced by non-economic factors such as birth rate, death rate, and the propensity to consume. These non-economic factors are stable and can not be changed by economic policy.

1 Supply-side economics as well as industrial policy can be given as supply-oriented policy alternative. Industrial policy and supply-side economics are similar in the aspect that both have more interest in the supply-side rather than the demand-side. But, they show a sharp difference; supply-side economics is focused on capital formation by general means, for example, tax-policy. In contrast, industrial policy is focused on capital allocation by discriminative support and control.
### Table 1. Various Definitions of Industrial Policy

<table>
<thead>
<tr>
<th>Authors</th>
<th>Definition of Industrial Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leone and Bradley (1981)</td>
<td>Government's efforts to accomplish an economic growth</td>
</tr>
<tr>
<td>Lindbeck (1981)</td>
<td>All measures, except monetary and fiscal policy, which influence aggregate variables of macro economy or mechanism of capital allocation.</td>
</tr>
<tr>
<td>Adams and Lawrence (1983)</td>
<td>All measures which improve the economy's supply potential: anything that improve growth, productivity, and competitiveness.</td>
</tr>
<tr>
<td>OECD (1983)</td>
<td>Economic measures that compliment macro economic policies to improve growth and productivity</td>
</tr>
<tr>
<td>Johnson (1984)</td>
<td>A summary term for activities of governments that are intended to develop or retrench various industries in a national economy in order to maintain global competitiveness.</td>
</tr>
</tbody>
</table>

### Figure 1. Classification of Industrial Policy

![Industrial Policy Diagram](image)

in short periods of time. On the other hand, when imperfect market exists and investment yields more social than private benefits, to increase the effectiveness of resource allocation, the government uses an industrial policy that focuses on allocation of resources among industries. The effect of the policy is direct in comparatively short periods of time.

Third, industrial policy includes two kinds of efforts: one is an passive effort that accepts the principles of market while trying to complement market failure; the other is an active effort
that defies the principles of market while trying to overcome the limits of market mechanism.

The basis for government intervention lies in the concept of market failure that is a failure in the optimal allocation of capital through the market mechanism. But industrial policy does more than passively increase the effectiveness of resource allocation by correcting market failure; it states that government plays an active role by strategically promoting or adjusting certain industries, under the assumption that the market cannot adapt to the structural changes in the world economy and plan for economic growth itself.

Historically, industrial policy has been emphasized in developing or under-developed countries. Since the government of developing countries are more eager for rapid economic development, market failure is more apparent in larger degrees in developing countries than in developed countries.

Recently however, Japan, who implemented industrial policies in very direct and aggressive forms in the 1950s through 1960s, began to support free trade and has taken a passive stance in market intervention. The U.S., on the other hand, who traditionally preferred free trade and the free market principle, began to expand the range of government intervention (Yoon and Yeom, 1992). These phenomena are symptoms of the global diffusion of industrial policy.

Consequently, industrial policy can be defined, narrowly, as a government economic policy that aggressively influences a specific industry or group of firms to strengthen international competitiveness or lower economic concentration.

Specifically, strengthening international competitiveness or lowering economic concentration is the purpose of industrial policy; support and regulation are the tools and specific industries and groups of firms are the object.

2. Classification of Industrial Policy

Even though we have broadly defined the concept of industrial policy above, it is difficult to figure out exactly what industrial policy is and what it is not. Because it is influenced by country-specific environment and each country's own history, industrial policy has various forms and contents.

Industrial policy can be classified into two categories based on its form and characteristics: industrial structure policy and industrial organization policy. Industrial structure policy, based on several standards such as elasticity of income, dynamic comparative production cost and absorption of labor, changes the intra-industrial resource allocation in order to transform the present industrial structure into a desirable structure by stimulating new firms to participate in promising industries and supporting the smooth exit of firms from declining industries.

In industrial structure policy, promotion policy supports specific industries according to the purpose of the policy and adjustment policy rationalizes declining industry or regulates over-investment behavior.

Industrial organization policy is a policy that increases performance by setting the rules

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2 Industry structure policy is classified by scope of policy impact.

First, general industrial policy is not the kind of policy that expects discriminative effects which promote or restrain a specific industry or specific behavior, but expects indifferent and general effects toward the whole industry and behavior. A representative example in this range is the policy which builds infrastructure such as highways, harbors, and information network, etc.
and norms of market and corporate behavior and by influencing market structure and the competition between firms. Industrial organization policies are: anti-monopoly policy, which promotes competition, and small- and medium-sized business policy, which protects smaller corporations from big business firms.

3. Methodology of Research

Industrial policy is largely concerned with international competitiveness, business concentration, government decision making processes, corporate tax law and many other factors. However, with limited academic knowledge and experience, it would be impossible to encompass the total scope of industrial policy. Therefore, this research paper will concentrate only on the economic aspect. Given the complexity of this issue, an evolutionary perspective investigating longitudinal data helps illuminate how and why such policies have been introduced in each country.

Since each country's industrial policy can be very subjective and reflect the personal thoughts of each decision-maker, it is extremely difficult to obtain objective research data. To avoid inconsistencies, this paper uses Korean-Japanese official document to describe both the governments' objectives and strategies. The unbiased data of these official documents will facilitate the comparison of the changes that have occurred in each country (See Table 2).

**Table 2. Research Design**

<table>
<thead>
<tr>
<th>Item</th>
<th>Korea</th>
<th>Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sources of Data</td>
<td>Official Documents (官報)</td>
<td>Official Documents (官報)</td>
</tr>
<tr>
<td>3. Industries of Analysis</td>
<td>Manufacturing Industry</td>
<td>Manufacturing Industry</td>
</tr>
<tr>
<td>4. Categories of Analysis</td>
<td>Law, Presidential decree,</td>
<td>Law, Ordinance, Notice,</td>
</tr>
<tr>
<td></td>
<td>Ordinance, Notice, Announcement</td>
<td>Announcement</td>
</tr>
</tbody>
</table>
4. Comparison between Korean and Japanese Industrial Policy

4.1. Historical Trends

Table 3 shows the four categories defined by Korean industrial policy in the official documents. The time between 1948 to 1991 has been divided into four periods, each beginning in the years 1948, 1961, 1972 and 1980. These years have been selected because of the enormous changes affecting the industrial policy in these periods.

In the 1960s to the early 1970s, because the government’s main focus was increasing exports, Korea's industrial growth was concentrated in labor-intensive industries due to availability of cheap labor. As the government realized that there was very little room for growth in labor intensive industries, it changed direction to the heavy chemical industry. However, due to the second oil shock during the early 70s, over-investment in the heavy chemical industry resulted in a stalled economic growth. In order to resolve economic problems and show growth in the national economy, the government reverted to a more diversified portfolio of industries. Some of those industries were construction equipment, diesel engines, textiles, automobiles, fertilizer and shipbuilding.

In 1986, the government established the Industry Development law by integrating the Promotion law of the Machinery, Electronics, Shipbuilding, Petroleum, Steel, Aircraft and Nonferrous Metals and the Textile modernization laws. The main philosophy of its industrial policy was changed from direct intervention in industries to functional support. Japanese industrial policy can be said to have had its beginnings in the Meiji period; the real start however was in 1945 after World War II. Similar to that of the Korean industrial policy, Japanese industrial policy can be divided into four stages (KIET 1982, Komiya et al, 1988). The first stage began in 1946 right after World War II. In order to reconstruct the wrecked country, it concentrated on the steel and coal industries, and on power plant development.

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4 In the years 1948, 1961, 1972, 1980, Korea experienced significant political change which influenced the goal and direction of its industrial policies radically. For example, in 1948, President Lee established a new Korean government, in 1961, President Park Chung-Hee assumed power as a result of a military coup and executed export-driven policy, in 1972, after amending the constitution in order to extend his Presidential tenure, President Park changed goal of industrial policies from supporting light industries to promoting heavy chemical industries. and lastly, in 1980, President Chun who assumed the reins of government, tried to stabilize Korean economy.

5 Changes in the 1960s of the industrial structure was not the direct purpose of industrial policy, The entrepreneur met the export drive of the government and produced goods sold in foreign markets. Accordingly, low value-added labor-intensive light industry became the growth-leading industry. But after late 1970s industrial policy departed from the underdeveloped industrial structyre-oriented light industry and drove the selective promotion policy in order to enhance industrial structure through the development of heavy industry.

6 In individual promotion law, government regulation influenced comprehensive fields such as market entrance, expansion of business, production etc. Therefore many competition-restrictive factors existed. Industry Development law comprehensively deregulated the competition-restrictive measures regarding business activities such as market entrance and investment under appointment as an industry rationalization object.
through the Priority Production System\textsuperscript{7} policy and firm rationalization policy of the 1950s.

The second stage of Japan's industrial policy took place in the years between 1961 and 1970. In this period, the report of the investigation committee on industrial structure in 1963\textsuperscript{8} specifically stated that there was an intense promotion of the heavy chemical industries. The third stage, in order to solve the national issues dealing with environment and overpopulation that resulted from the Promotion policy of the heavy chemical industry, the 1970s intensively promoted R\&D intensive industries, highly-skilled assembly industries, knowledge industries, and the fashion industry. During this period, the Japanese government suggested a new direction for its industrial policy to improve the international competitiveness of its industries in line with the free trade and capital movement and to cultivate its ability for technological development.

Lastly, the fourth stage is the 1980s, known as the Creative Knowledge Intensive Era. This period emphasized autonomous technological development, thus breaking away from the patterns of dependency on Western technologies of the previous stage\textsuperscript{9}. During this period, increasing the efficiency of industry was emphasized through vitalization of the market price structure and the reduction of governmental support instead of the direct support method on specific industries (see Table 4).

A comparison of Korean and Japanese industrial policies is summarized in Table 5. As seen in the table, the two countries share similarities in the development of their industrial policies. In several historical stages, both countries have used industrial policies to guide their economic development in planned direction.

It can be observed that limitations in the preceding stage became the policy target of the next stage. In particular, both Korea and Japan attempted to restructure their industries through intensive support policies for heavy chemical sectors in their earlier stages. It appears that Korea is following the Japanese with about a ten-year gap.

\textsuperscript{7} The Priority Production Method is a type of industry policy based on the unbalanced growth theory that the whole-economy develops by developing specific industries that has a high effect on other industries. In 1950s, Japanese government supported preferentially basic industries such as steel industry, coal industry and electric industry to build the economic infrastructure.

\textsuperscript{8} In those days, the reason why Japanese government selected heavy industry (e.g., steel, machinery, chemical) as a major promotion industry was that these industries had the highest productivity (based on increase rate of production), therefore, they expected that these industries were most efficient in enhancing international competitiveness of the whole-Japanese industry and growth in domestic and foreign market (based income elasticity). These industrial structures also influenced exports. Consequently their world-market share of steel, electronic, car industry was enlarged.

\textsuperscript{9} In this stage, new vision named 'creative knowledge intensification' considering supply side as well as demand side reflecting needs of the nation was presented. The need to decrease technology dependence on the West and to enhance independent power of technology development as the second greatest economic power. Also they tried to find an industry structure that could contribute to world society.
### Table 3. Korean Industrial Policies

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Promotion Policy</td>
<td>The Marine Products Import Permission</td>
<td>The Deliberation Committee (Machine, Electricity, Automobile, Iron, Textile, Foods)</td>
<td>The Heavy Chemical Industry Development Committee</td>
<td>The Industry Development Law</td>
</tr>
<tr>
<td></td>
<td>The National Bonds For Industry Development</td>
<td>The Machinery Industry Promotion Law</td>
<td>The Machinery Industry Promotion Plan (Basic, Action)</td>
<td>The Software Development Promotion Law</td>
</tr>
<tr>
<td></td>
<td>The Shipbuilding Industry Promotion Law</td>
<td>The Shipbuilding Industry Promotion Plan (Basic, Action)</td>
<td>The Oil And Chemical Industry Promotion Plan (Basic, Action)</td>
<td>The Airline and Space Industry Promotion Law</td>
</tr>
<tr>
<td></td>
<td>The Money Support For Export Promotion</td>
<td>The Oil And Chemistry Industry Promotion Law</td>
<td>The Electronic Industry Promotion Plan (Basic, Action)</td>
<td>The Industry Basic Technology Development Plan</td>
</tr>
<tr>
<td></td>
<td>The Individual Trade Ex/Import Goods</td>
<td>The Electronic Industry Promotion Law</td>
<td>The Non Ferrous Metal Industry Promotion Plan (Basic, Action)</td>
<td>The New Technology Financial Support Law</td>
</tr>
<tr>
<td>Adjustment Policy</td>
<td>The Industrial Rationalization Committee</td>
<td>The Textile Industry Adjustment Plan</td>
<td>The Textile Industry Modernization Basic (Action) Plan</td>
<td></td>
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<tr>
<td></td>
<td>The Provisional Law For Facility Of Textile Industry</td>
<td>The Industrial Rationalization Committee Rules</td>
<td>The Construction Equipment Manufacturing Industry Rationalization Plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Facility Of Textile Industry Adjustment Plan</td>
<td>The Textile Industry Modernization Law</td>
<td>The Diesel Engine Manufacturing Industry Rationalization Plan</td>
<td></td>
</tr>
<tr>
<td>Anti-Monopoly Policy</td>
<td>The Price Stabilizing And Anti-monopoly Law</td>
<td>The Textile Industry Modernization Plan (Basic, Actual)</td>
<td>The Automobile Industry Rationalization Plan</td>
<td></td>
</tr>
<tr>
<td>Organization Policy</td>
<td>The Model Factory For Rationalization of Small and Medium Business</td>
<td>The Abrogation Of The Heavy Chemical Industry Development Committee</td>
<td>The Shipbuilding Industry Rationalization Plan</td>
<td></td>
</tr>
<tr>
<td>Small and Medium Business Policy</td>
<td>The Small and Medium Business Base Law</td>
<td>The Oil And Chemical Industry Promotion Plan (Basic, Action)</td>
<td>The Unfair Competition Prevention Law</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Small and Medium Business Credit Law</td>
<td>The Small and Medium Business Promotion Law</td>
<td>The Subcontracting Law</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>The Small and Medium Business Goods Purchasing Promotion Law</td>
<td>The Revision of Anti-Monopoly Law</td>
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<tr>
<td></td>
<td></td>
<td>The Small and Medium Business Promotion Plan</td>
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<td></td>
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<td>The Small and Medium Business Modernization plan</td>
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<td></td>
<td></td>
<td>The Small and Medium Business Coordination Law</td>
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</tbody>
</table>
### Table 4. Japanese Industrial Policies

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Anti-Monopoly Policy</td>
<td>The Anti-monopoly Law</td>
<td>The Anti-monopoly Law</td>
<td>The Anti-monopoly Law</td>
<td>The Anti-monopoly Law</td>
</tr>
<tr>
<td>Decade</td>
<td>Goals</td>
<td>Outcomes</td>
<td>Limitations</td>
<td></td>
</tr>
<tr>
<td>--------</td>
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<td>----------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>1950s</td>
<td>Reviving the economy; increasing the productivity</td>
<td>Steel, coal, electric power industries developed under favorable support policies</td>
<td>Lack of industries with international competitiveness</td>
<td></td>
</tr>
<tr>
<td>1960s</td>
<td>Boosting international competitiveness</td>
<td>Heavy chemical industries developed; world market share increased</td>
<td>Environmental problems and labor issues raised</td>
<td></td>
</tr>
<tr>
<td>1970s</td>
<td>Development of knowledge-intensive industries</td>
<td>Overcapacity reduced; antitrust policies strengthened; R &amp; D, advanced assembly, and fashion-related industries developed</td>
<td>Too much emphasis on the supply side; dependence on foreign technologies continued</td>
<td></td>
</tr>
<tr>
<td>1980s</td>
<td>Development of creative knowledge development industries</td>
<td>Information-related industries developed; more reliance on the market mechanism rather than industrial policies</td>
<td>Excessive trade surplus; US' trade pressure increased</td>
<td></td>
</tr>
</tbody>
</table>

**Table 5. Comparison of Korean Japanese Industrial Policies**
4. 2. Case Analysis of Korean and Japanese Industrial Structure Policy

Given the similar trends in the historical development of industrial policies in Korea and Japan, we will now investigate specific cases in the official documents of two selected industries: machinery and textile. Our case analysis uncovered the following similarities and differences: First, the implementation process of a designated policy and the objectives stated in the laws of Korea and Japan were found to be almost identical. As in the case of the machinery industry, for example, the policy-implementation process in Korea and Japan was carried out in the following order: First, the establishment of committee; second, the enactment of laws; and third, the formulation of a basic (action) plan. In other words, the implementation of the industrial policy on the machinery industry was in the following three steps: first, the process of organizing a committee that would be in charge of the enactment of various laws or examination of issues; next, the rule setting process, as a background for pursuing the actual policy; and finally, the process of establishing the specific drive plants based on the previous processes. The basic plans which were formulated on a four to five year basis and the action plans, written every year, were also the same between the two countries (See Figure 2).

**Figure 2. Implementation Process for Promoting Machinery Industry in Korea and Japan**

- Organizing a Committee
  - Establishing a Law
    - Establishing an Enforcement Ordinance
    - Establishing Detailed Regulations

- Formulating Basic Plans (4~5 year)
  - Formulating Action Plans (yearly)

10 The reason why we choose the machinery and textile industries as a main subject of analysis is that these industries have been the industries with the most thoroughly carried out industrial policies. Both of the countries have contributed to sound development of national economy by promoting the modernization of the machinery industry.
#### Table 6. Comparison Between Korean and Japanese Industrial Policy

<table>
<thead>
<tr>
<th>Similarities</th>
<th>Differences</th>
</tr>
</thead>
</table>
| 1. Policy implementation process  
   Establishing a committee → Establishing a law →  
   Formulating basic(action) plan | 1. Industrial policies are implemented by industry segments in Japan |
| 2. Basic plans are formulated in every 5 years, action plans are formulated in every year. | 2. Industrial policies are revised flexibly in Japan.  
   (Provisional law) |
| 3. Explicit objective of law | 3. Industrial structure policy is related with cartel and anti-monopoly law in Japan |
| 4. In Japan, related committees are play a essential role in formulating or implementing industrial policies | 4. In Japan, related committees are play a essential role in formulating or implementing industrial policies |

Japanese policies to prosper through close relations and cooperation among policy makers and associated committees\(^{11}\).

Secondly, firms should actively participate in the formulation of industrial policies through public hearings and joint committees to reflect on its position rather than just try to adapt to the established policies. In the past, illegal activities of bribery and lobbying may have worked for a few firms; however, in the future, this will be difficult to come by. The firms that still use these tactics may be blacklisted from the economic world.

Lastly, since we have used official documents in comparing the two countries’ industrial policies, this paper may provide a wide range of somewhat unbiased information.

The value of an industrial policy lies in its effective implementation. More explicit considerations for implementation should be incorporated into the details of any industrial policy. Subsequently, the role and responsibility of policy makers go far beyond merely designing good policies; indeed it encompasses a comprehensive understanding of the specific situations in their application.

Seoul National University;
The Catholic University of Korea;
The Institute of Industrial Policy Studies;
The Institute of Industrial Policy Studies;
Yonsei University

\(^{11}\) These cooperation systems can be inferred by the fact that Japanese industrial policies, like laws, were changed more frequently than those of Korea.
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