South Korean Competitiveness in the Defense Industry Using the Diamond Model*

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Abstract

The purpose of this paper is to evaluate the competitiveness of the defense industry of Korea and suggest a possible policy to promote it. Based on Michael diamond model, we computed the index of the defense industry and evaluated the nationwide competitiveness of South Korea. Throughout this process, we developed low rank factors and measurement indicators for determining competitiveness and also drew out the relative importance of low rank factors and the absolute importance of the measurement indicator by means of a series of surveys.

The results from the calculation of national competitiveness through our model show that the competitiveness of the Korean defense industry stays at the level of 34 percent of the USA, 57 percent of the UK, and 70 percent of France. As to factor conditions, it has relatively lower and below the average competitiveness; for factor conditions: capital (10 percent of the USA) and research and development (19 percent of the USA); for demand condition: domestic market (30 percent of the USA) and economic environment (41 percent of the USA); and for business competition, structure, and competition (11 percent of the UK). However, for the area of related and supporting industries, it has above the average or a similar level of competitiveness with high-tech industry factor (76 percent of the UK) and government support factor (46 of the USA); also for the area of firm strategy, structure, and rivalry, economic environment (51 percent of the USA).

We further analyzed internal strength and weakness as well as external opportunity and threat for the defense industry and suggest some strategies for improving the competitiveness of the defense industry.

Key Words: South Korea, national competitiveness, defense industry, diamond model, SWOT analysis

* This paper is partially drawn from Han-Hee Kim’s master thesis at the Korean National Defense University.
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I. Introduction

The military power and defense industry capabilities of a nation are not simply an ability to deter and/or stage war but rather operate in the international community as a comprehensive national power guarding the economic, social, and cultural capacity of that nation. However, the defense industry in South Korea (hereafter, Korea) has failed to grow autonomously while stuck in a closed environment where the government has been the main player.

According to the data released in 2010 by the Stockholm International Peace Research Institute (SIPRI), Korea was ranked third in the import of weaponry from the international defense industry between 2005 and 2009 while ranking 17th in the export of weapons. When it comes to the numbers, imports stood at 7,087 million dollars, while the value of exports was 612 million dollars, yielding a difference of 6,475 million dollars. These figures alone indicate that Korea has weak competitiveness in the international defense industry market.

Data released internally by the Korea Defense Industry Association (KDIA) in 2010 as part of the 2010 Defense Industry Business Analysis indicate that the performance of the Korean defense industry is still in a stalemate. It should not be overlooked that the defense industry policies of Korea have been centered on the domestic market. Up to now, the defense industry of Korea has not been successful because about 14-15 percent of the national annual budget has been continuously invested in the defense sector for the past several decades.

The present condition of the Korean defense industry is far from being entirely negative. While holding a small share of the international defense industry market, Korea's export volume has been steadily increasing. Since 2006, exports have grown sharply with the total volume reaching 1.2 billion dollars in 2010 and 1.5 billion is targeted in 2011. Particularly, export sales of state-of-the-art weapons such as the T-50 and submarines are good examples demonstrating the enhanced competitiveness of the Korean defense industry.

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1) The five major importers of conventional weapons in the world were ranked in the order of China (9 percent), India (seven percent), South Korea (six percent), UAE (six percent), and Greece (four percent).

2) In 2009, the rate of operating income of defense contractors was five percent and average capacity utilization rate 61.85 in the defense industry sector indicating significantly lower level when compared with the rest of the industries. For reference, the rate of operating income and average capacity utilization rate of the whole industry stood respectively at 6.1 percent and 74.6 percent.

3) T-50 is the only 21st century supersonic advanced trainer and light attack jet developed by the Defense Acquisition Program Administration (DAPA) and the Korean Aerospace Industry, LTD. (KAI). It is designed with the state-of-the-art technology and has high-tech avionics. With the successful execution of this program, Korea became the world’s 12th country that had developed supersonic aircraft.