

Open Source Software Promoting Policy in Korea

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Abstract. Every countries governments in the world is conducting Open Source Software promoting policies to establish fair-competition environment in the software market and to secure technical competitiveness of domestic software industries. The Open Source Software promoting policy is divided into the supply support policy that aims to expand participation of domestic software companies and developers in Open Source Software development projects and the demand promotion policy that aims to establish fair-competition environment to improve monopoly and oligopoly structures. The Korean government has promoted the supply support policy including development of Open Source Software technologies and supports for communities and the demand promotion policy including pilot projects, publicity campaign activities for Open Source Software and demand-shaping in e-government projects. As a result, the share of Linux in the server operating system market increased rapidly. Korea's Open Source Software policies focused on spread of Linux at the early stage. And now the focus is extending to development of Open Source Software and demand-shaping in all software spheres.

1 Introduction

The software industry is the key infrastructure of the knowledge industry in the 21st century. Each countries governments in the world consider government support for Open Source Software to be essential to establish fair-competition environment of the software industry and to develop domestic industries. They find their ground for the government support on these reasons: Domestic software is not competitive comparing with global companies' proprietary software so that the domestic software market is monopolized by foreign software. In order to improve this monopolized structure, it is necessary to secure a competition system. Also, by utilizing Open Source Software's rapid technology innovation and accessibility to development knowledge, the domestic industry can have an opportunity to secure technical

competitiveness and to catch up with advanced countries' technologies. In particular, Open Source Software has a different starting point and dominance comparing with proprietary software. So it is said that the government should level the playing field of Open Source Software.

The Open Source Software promoting policy consists of supply supporting policies and demand promoting policies. The supply supporting policies aim to improve domestic software companies and developers' software development capacity by expand their participation in Open Source Software development projects, furthermore, aim to enhance technical competitiveness of domestic proprietary software companies. The demand promoting policies aim to establish fair-competition environment in order to improve fixation of proprietary software and the monopolized structure caused by externality of the network.

Table 1. Type of Open Source Software Promoting Policies

Supply supporting policy of Open Source Software	<ol style="list-style-type: none"> 1. Development of Open Source Software technologies 2. Promoting opening of developed software 3. Establishment of the "Clearinghouse" that provides user needs, information and software libraries 4. Constructing hardware and platforms required for development 5. Education and training support related to development
Demand promoting policy of Open Source Software	<ol style="list-style-type: none"> 1. Offering equal treatment in purchasing government software 2. Providing Open Source Software information 3. Pilot-application of Open Source Software

Source: Selection from the Open Source Software Promotion Working Group (2002), p.154

2. Current status of Korea's Open Source Software policy

Korea's Open Source Software policy started in 2003. In 2002, the Open Source Software Promotion Working Group, one of working groups operated by the Korea IT Industry Promotion Agency that aimed to enhance competitiveness of the software industry reported that the government needs to promote Open Source Software promoting policies in order to improve the monopolized structure of the domestic software market, to reduce costs in developing software and introducing information systems, and to enhance competitiveness of domestic software companies through securing original technologies. The working group also suggested that an institute that will take full charge of these duties is required. The government adopted this report hence the Open Source Software policies.

Based on the suggestion of the working group, the Open Source Software Support Center was established under the jurisdiction of the Korea IT Industry Promotion Agency in 2003. The support center is fully responsible for activation of Open Source Software and has promoted policies for promotion of Open Source Software. Korea's Open Source Software promoting policies also has been promoted centering on supply supporting policies and demand promoting policies. Major contents are as follows:

2.1 Demand promoting policies

2.1.1 Pilot projects

Until 2003, the server operating system market in the public sector of Korea was very biased toward Unix so that policies to spread Linux in the server operating system market were conducted first.

Officers in charge of informatization in public institutions were anxious about that; there was no success story of introduction of Open Source Software. So they could not ensure successive operation of Open Source Software. In order to secure success stories, pilot projects of introduction of Open Source Software were promoted from 2003 to 2007, aiming at 40 institutions.

The pilot projects gradually introduced Open Source Software, starting from simple tasks such as web servers toward core tasks of institutions. The purpose of the pilot projects was to expand introduction of Open Source Software to other tasks within an institution and to promote other institutions to benchmark the Open Source Software applied system. These projects are judged to be a success.

2.1.2 Application of Open Source Software to the e-government

The pilot projects for Open Source Software supported by the government were conducted on a small scale thanks to limitations of direct support of the government. However, the Open Source Software Support Center examined possibilities to introduce Open Source Software to e-government projects promoted by each ministries and projected its budget and effects. Then large scaled government projects such as the National Education Information System (NEIS) and e-government projects for local authorities adopted Open Source Software.

The Presidential Committee on Government Innovation and Decentralization established a directive "Guide to introducing Open Source Software to e-governments" that aimed to promote introduction of Open Source Software to e-government projects. In addition, the Ministry of Planning and Budget, that deliberates on the government's budget, induced government departments to introduce Open Source Software. Since 2007 it has had each ministries present projects in which Open Source Software can be applied and has examined opportunities to introduce Open Source Software to various government projects. These took effects on introduction of Open Source Software to large e-government projects.

2.1.3 Publicity campaign for Open Source Software

The social awareness of Linux was improved in late 1990s thanks to the "venture boom" where many entrepreneurs established ventures based on Linux. However, the awareness of Open Source Software was still very low. Linux was considered to be unstable, weak on security and inconvenient to use. Accordingly, it was necessary to improve public awareness to promote Open Source Software.

First, various seminars and technical instructions for staffs in charge of informatization in public institutions were conducted. These aimed to generate consensus about Open Source Software promoting policies and to improve negative awareness of Open Source Software.

Second, to spread success stories of introduction of Open Source Software, books of success stories of introduction of Open Source Software at home and abroad and Open Source Software reports that provide information on various Open Source Software markets and technologies were published and distributed. It contributed to improving the social awareness of Open Source Software.

2. 1.4 Establishment of the Open Source Software Technical Support Center and the Open Source Software Competency Center

To raise credibility of Open Source Software and to accumulate technologies, the Open Source Software Technical Support Center was established in 2004, under the jurisdiction of the Korea IT Industry Promotion Agency. The Open Source Software Technical Support Center offers free technical supports to public institutions that introduced Open Source Software. It also examines Linux distributions and Linux-based solutions developed in Korea to expand Open Source Software-based domestic solutions.

In 2009, the Open Source Software Competency Center was established. It inspects reliability of various Open Source Software not limited to Linux, conducts integrative tests on various information systems embodied by Open Source Software stacks and offers consulting to help public institutions introduce qualified Open Source Software and Open Source Software stacks.

2.2 Increase of Open Source Software development

2.2.1 Development of Open Source Software core technologies

Want of developing Open Source Software core technologies came to the front in order to prevent users from being confused due to diversity of Open Source Software and to resolve various problems in solution structures. Accordingly, the Electronics and Telecommunications Research Institute (ETRI) and major developers of Linux distributions in Korea developed "Booyo", a standard Linux specification platform for servers and desktop computers. Based on the standard specification, SKC&C developed and commercialized "Ginux." Currently SKC&C is distributing it.

2.2.2 Supports to Open Source Software communities

Open Source Software is developed and advanced through voluntary participation of various developer groups in the world. Therefore the key driving force to promote Open Source Software is promotion of spontaneous and voluntary private communities. Korea has very few developer's communities. Moreover existing communities have many limitations in their activities thanks to economic constraints.

Hence direct and indirect supports for existing communities to hold seminars and workshops, the Open Source Software Challenge since 2007. In order to foster communities linked with development assignments, the development support project for Open Source Software communities has been conducted since 2008.

2.3 International cooperation

International cooperation among the three countries in Northeast Asia -Korea, China and Japan- in Open Source Software started in 2003 by establishment of a private forum. In September 2003, the Korea-China-Japan ministerial conference on information technology concluded an agreement on international cooperation for Open Source Software promotion. At the first forum, the three countries reached an agreement-in-principle for cooperation in ten issues of Open Source Software including conclusion of a Memorandum of Understanding among the Korea-China-Japan IT directors, standardization and technical exchange. At the second forum in Sapporo, Japan, three working groups (technology development / test, human resources development and standardization) which are the promotion system of cooperation among the three countries were established.

3. Policy Effects and Future Directions

In 2003, the first year of Open Source Software promoting policies, the share of Linux in the server operating system market was only 12.1 percent. It rapidly increased to 24.6 percent in 2007. It was empirically analyzed that Linux's market share increase of 49.5 percent was influenced by the government policies.¹⁾

Korea's Open Source Software promoting policy is being gradually extended to all software stacks, while it focused on Linux in the early stage. And the policy direction is being changed from the demand promoting policy that is direct intervention of the government through pilot projects, to information providing policies such as provision of technical information of Open Source Software and expansion of production base such as supports for communities and enhancement of supplier base. That is, Korea is trying to change from a Open Source Software consumer to a Open Source Software provider.

In the future, to spread a series of governance policies -how to choose, manage, operate, maintain and dispose Open Source Software- is required rather than spread of Open Source Software. In addition to the Open Source Software governance as a

finished product, to establish and promote governance policies for developers that aim to help developers understand and utilize open sources is the political problem to be solved.

1) Jeon, Young Seo and Kim, Tae Yeol, "An Empirical Analysis on Open Source Software Promoting Factors", *Journal of Regulation Studies*, Vol. 17 No. 1 June 2008, Korea Economic Research Institute.