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The Role of Major Donors in Health Aid to the Democratic People's Republic of Korea

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We investigated the major trends in health aid financing in the Democratic People's Republic of Korea (DPRK) by identifying the primary donor organizations and examining several data sources to track overall health aid trends. We collected gross disbursements from bilateral donor countries and international organizations toward the DPRK according to specific health sectors by using the Organization for Economic Cooperation and Development creditor reporting system database and the United Nations Office for the Coordination of Humanitarian Affairs financial tracking service database. We analyzed sources of health aid to the DPRK from the Republic of Korea (ROK) using the official records from the ROK's Ministry of Unification. We identified the ROK, United Nations Children's Fund (UNICEF), World Health Organization (WHO), United Nations Population Fund (UNFPA), and The Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) as the major donor entities not only according to their level of health aid expenditures but also their growing roles within the health sector of the DPRK. We found that health aid from the ROK is comprised of funding from the Inter-Korean Cooperation Fund, private organizations, local governments, and South Korean branches of international organizations such as WHO and UNICEF. We also distinguished medical equipment aid from developmental aid to show that the majority of health aid from the ROK was developmental aid. This study highlights the valuable role of the ROK in the flow of health aid to the DPRK, especially in light of the DPRK's precarious international status. Although global health aid from many international organizations has decreased, organizations such as GFATM and UNFPA continue to maintain their focus on reproductive health and infectious diseases.

Key words: Health financing, Democratic People's Republic of Korea, Health

INTRODUCTION

After the dissolution of the Soviet Union in 1991, the Democratic People's Republic of Korea (DPRK) was severely affected, and after the famines during the 1990s, its basic health indicators began to fluctuate as well. DPRK made appeals for emergency relief to the international community. Since the mid-1990s, large amounts of foreign aid poured into DPRK. Despite large amounts of foreign support, it has been difficult to observe major trends in the flow of health resources due to a lack of information and access specific to DPRK. This problem continues to impede the ability of current policy makers to plan future aid strategies.

Health resource data, in particular, is essential to identifying the key players among donors or implementing organizations. It reveals how each of these donors allocates its health resources into which health sectors and according to certain donor

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trends. Much of the existing health resource data is an aggregation of large amounts of information with varying levels of quality and reliability regarding data collection. We designed this study to analyze all relevant health resource data and determine what data can then be used to inform health policy.

The Organization for Economic Cooperation and Development (OECD) is one of the leading sources of health-related financial data and is collected directly from the OECD member countries and organizations [1]. The OECD's creditor reporting system (CRS) database collects invaluable data at the project level by providing detailed descriptions of the purpose of each project [1].

In this paper we used the OECD CRS database and the financial tracking service (FTS) of the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) to collect data on health resources flowing toward the DPRK [2,3]. We then used this primary data to observe any overall trends in health finance, determine the main donors and implementing organizations within the health sector, and isolate the health topics and diseases with the most concentrated funding. This paper should be valuable in helping policy makers to identify the major donors active in those health sectors most relevant to the DPRK. This paper should further guide policy makers on how to collaborate with these major donors, so as to facilitate more effective health aid strategies toward the DPRK.

This study examines health aid to the DPRK from the 22 Development Assistance Committee (DAC) countries of the OECD, the UNOCHA, the World Health Organization (WHO), the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA), the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM), and the International Federation of the Red Cross and Red Crescent Societies (IFRC).

We collected gross disbursements of health aid to the DPRK from bilateral donor countries and agencies according to the OECD's CRS database and only used health-related CRS codes to determine trends in health aid to the DPRK. The OECD database comprises gross commitments and disbursements, as well as project-level details, from OECD DAC and non-DAC member countries, multilateral donor institutions, and private donor institutions. In this study, we only examined gross disbursements and the corresponding project-level data from 2000 to 2011 that were categorized under two specific CRS purpose codes: CRS 120 (health) and CRS 130 (population policies / programs and reproductive health). We tracked gross disbursements of humanitarian aid using the FTS, a database maintained by UNOCHA that provides detailed humanitarian aid information. To analyze trends among the United Nations agencies, we extracted gross disbursements from all available annual financial reports for each organization. We used this same method to assess data from GFATM and IFRC.

To analyze health aid from Republic of Korea (ROK), we used official data provided by the Ministry of Unification concerning all humanitarian aid from the ROK toward the DPRK. In particular, we examined a white paper on the inter-Korean cooperation fund and the breakdown of health aid data to the DPRK.

MAJOR HEALTH AID DONORS TO THE DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA

We analyzed a total of 94 donors who provided medical aid to DPRK from 2000 to 2011. We compiled a list of the top 11 organizations and groups that were responsible for a total of more than 10 million US dollars (Figure 1). All other aid contributions by donors were significantly smaller by comparison.

Figure 1 shows OECD CRS data and UNOCHA FTS data from countries and institutions that provided humanitarian aid to DPRK from 2000 to 2011. The results show that the ROK was the biggest contributor of aid assistance, providing approximately 79 million US dollars.

The ROK ended their health aid to the DPRK in 2009, but Sweden and Norway have continued to give health aid from 2000 up to the present, with a total of 43 million US dollars and 22 million US dollars. Finland, Italy, Australia, Germany, and Demark have also been involved in health aid toward DPRK since 2000. The results show that European countries and nongovernmental organizations (NGOs) have provided the highest and most consistent levels of aid assistance.

We identified 58 providers through our analysis of the UNOCHA FTS data (including bilateral and multilateral aid). Among these providers, health aid from WHO, the United Nations World Food Programme (WFP), UNICEF, and IFRC account for a significant portion of the total health and medical aid directed at DPRK. The Denmark Red Cross, United Nations Security Council, Norway Red Cross, Concern Worldwide (Irish NGO), Première Urgence (French NGO), Sweden Red Cross, United Nations organizations and NGOs, and UNFPA form the next tier of organizations that have continuously supported DPRK (Figure 2).

From these results on the total sum of health aid, we were

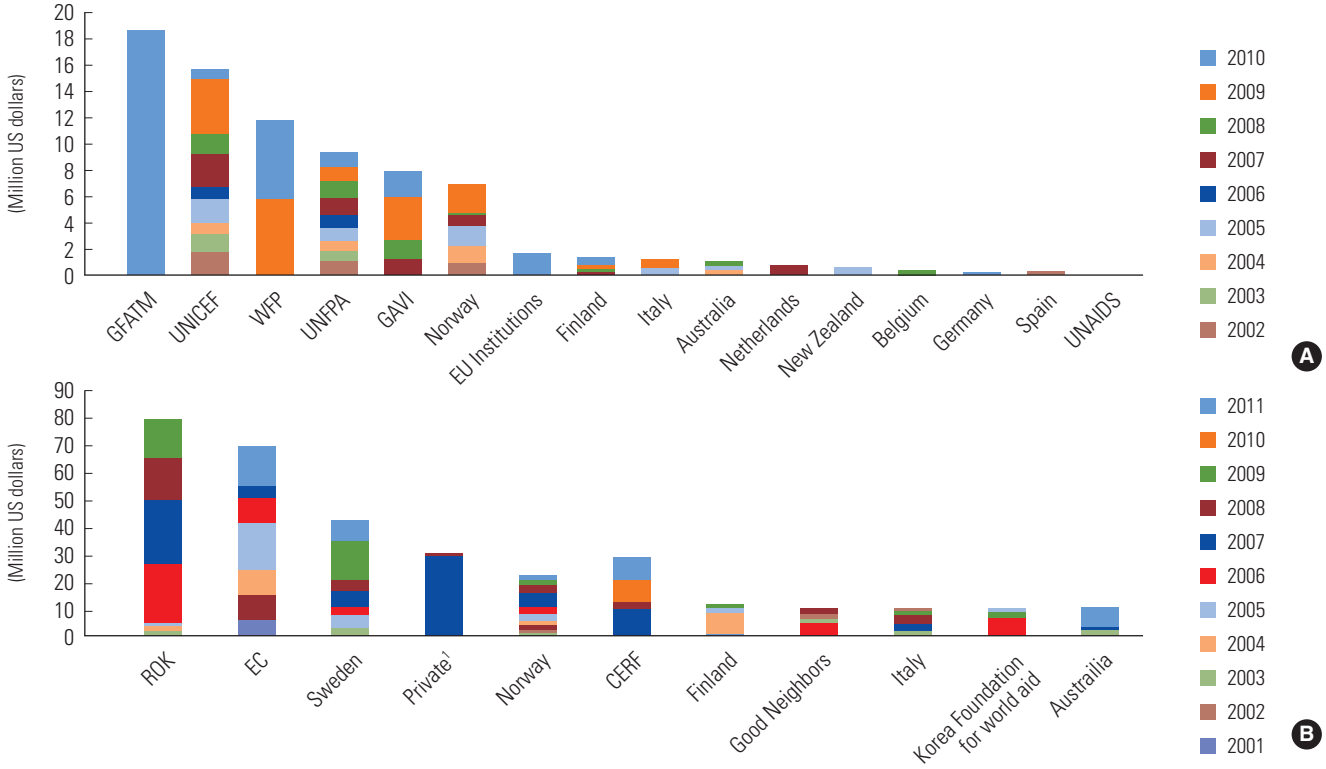

Figure 1. (A) Total amount of health aid toward Democratic People's Republic of Korea (DPRK) by the donors (Organization for Economic Cooperation and Development creditor reporting system). From Organization for Economic Cooperation and Development. Individual aid projects (CRS): creditor reporting system [2]. (B) Total amount of health aid toward DPRK by the 11 largest donors (United Nations Office for the Coordination of Humanitarian Affairs financial tracking service). From Financial Tracking Service. Korea, Democratic People's Republic of 2013: total humanitarian funding [3]. GFATM, the Global Fund to Fight AIDS, Tuberculosis and Malaria; UNICEF, United Nations Children's Fund; WFP, United Nations World Food Programme; UNFPA, United Nations Population Fund; GAVI, Global Alliance for Vaccines and Immunization; EU, European Union; UNAIDS, United Nations Programme on HIV/AIDS; ROK, Republic of Korea; EC, European Commission; CERF, Central Emergency Response Fund. [1]Individual and organizations.

able to identify WHO, UNICEF, UNFPA, and the Global Fund as the key donors in the health sector of aid relief toward DPRK. WHO and UNICEF are the main implementing organizations, but we believe that the UNFPA should be categorized as a key player. UNFPA has consistently placed an important focus in reproductive health, despite the fact that it does not rank as a top organization in terms of its total amount of health aid. Although WFP has also provided a significant amount of aid toward DPRK, they primarily provided emergency food aid in response to DPRK's natural disasters, so we excluded WFP as a key donor in the health sector. Beginning in the late 2000s, UNICEF and WHO started to collaborate with the Global Fund to secure grants for infectious diseases. The Global Fund has since emerged as a crucial funding agency. Therefore, we selected these four organizations as other key players and assessed each of their characteristics and roles within the health sector in the DPRK.

UNITED NATIONS POPULATION FUND

Cooperation between UNFPA and the DPRK began in 1985. UNFPA's programs have been committed to improving reproductive health status, family planning, and capacity building for population data collection.

Strategic Management with Definite Project Objectives and Outlines

In the early 1980s, UNFPA found that the DPRK had a well-developed network of hospitals and clinics with a centralized management system for supporting maternal care services for each district. However, compared to the well-established maternal health service system, reproductive health was a rela-

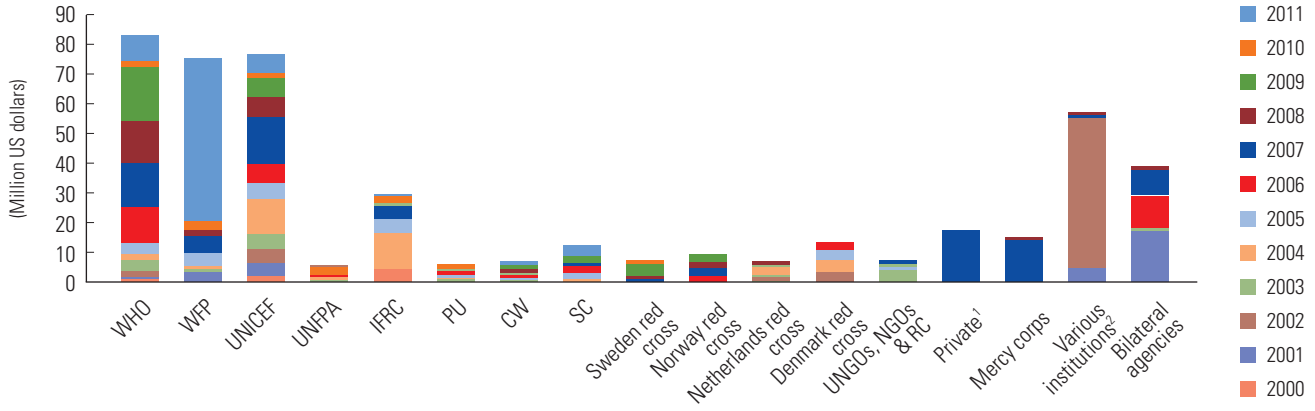

Figure 2. Total amount of health aid toward Democratic People's Republic of Korea by implementing institutions (United Nations Office for the Coordination of Humanitarian Affairs financial tracking service). WHO, World Health Organization; WFP, United Nations World Food Program; UNICEF, United Nations Children's Fund; UNFPA, United Nations Population Fund; IFRC, International Federation of Red Cross and Red Crescent Societies; PU, Premiere Urgence; CW, Concern Worldwide; SC, Save the Children; UNGOs, NGOs & RC, UN Agencies, NGOs and/or Red Cross. [1]Individual and organizations; [2]Various recipients. From Financial Tracking Service. Korea, Democratic People's Republic of 2013: total humanitarian funding [3].

tively unfamiliar concept for both policy makers and the general public. In particular, the use of contraceptives was an unfamiliar topic [4]. In light of such issues, UNFPA prioritized their goal of improving the quality of reproductive health care by emphasizing family planning and increasing the use of contraceptives among both women and men through various methods. For all of their projects, UNFPA produced detailed country program reports describing the various outcomes, outputs, and indicators.

Performance Management: Sustained Framework for Monitoring and Evaluating

Beginning in 1985, five cycles of assistance (1985 to 1989) were carried out. During the first cycle, UNFPA concentrated on Maternal and Child Health/Family Planning and Information, Education and Communication services. Both services were strengthened and expanded during the second cycle of assistance (1990 to 1997) [4]. The first and second cycles underscored the lack of male participation in reproductive, health-related issues, which meant that the burden of fertility regulation fell entirely on North Korean women. Starting with the third cycle of assistance (1998 to 2003), North Korean men were also included in the target population of the reproductive health project [5]. We saw that evaluations from the previous cycle were always reflected in the next cycle. UNFPA used its continuous presence in the recipient country to improve upon its existing programs so that they reflected internal assessments according to that recipient country's situation. However, their available official reports were not user-friendly; a more organized display platform with high accessibility should be undertaken to facilitate greater public use.

UNITED NATIONS CHILDREN'S FUND

Since 1985, UNICEF has been committed to its goal of improving the DPRK's health system and has addressed the most common causes of mortality in women and children by focusing on strengthening immunization services for infectious diseases through their Expanded Program on Immunization. They have also supported essential drug distribution, nutrition, water and environmental sanitation, and improving information-based planning systems for children and women's health.

Partnership Behavior: Strategic Partnerships with Various International Agencies

UNICEF has established collaborative partnerships with various international agencies, such as the Global Fund, Global Alliance for Vaccine and Immunization (GAVI), WHO, WFP, UNFPA, IFRC, and EU NGOs. In order to fulfill its primary goal of strengthening immunization services, UNICEF formed an invaluable partnership with GAVI in the late 2000s. GAVI is a public-private partnership that has, in recent years, established itself as one of leading institutions committed to increasing access to immunization in developing countries. By collaborating with GAVI, UNICEF has procured vaccines, upgraded cold chain systems, and strengthened the immuniza-

tion service system in DPRK. UNICEF also worked with the Global Fund as the principal recipient for malaria and tuberculosis (TB), in collaboration with WHO, which has acted as the sub recipient [6]. UNICEF has maintained its presence and influence in the DPRK, regardless of the country's political instability. Thus, unlike a number of other multilateral organizations, UNICEF has been able to cultivate a great deal of experience in the DPRK. It has served as one of the DPRK's most important recipient organizations. Although UNICEF can be considered a main recipient organization, the definite disparities in maternal health-related indicators among different provinces reveal that UNICEF needs to work to extend healthcare access to more provinces, especially those with poor maternal health.

Information Management: Building Up a Database

UNICEF developed a multi-indicator cluster survey together with WHO in the mid-1990s to collect comprehensive data related to women and children [6]. The completion of this nationwide cluster survey has revealed the health condition and nutritional status of women and children; moreover, it has also revealed important causes of morbidity and mortality for children, according to the geographical variation among the provinces. UNICEF has enhanced their capacity for project monitoring and evaluation since the 1990s. We were also able to find reports of the DPRK's needs assessments and UNICEF's responses in the organization's quarterly updates. However, it was difficult to locate the results of each project's evaluations, which prevented us from making determining whether each project was monitored and evaluated.

WORLD HEALTH ORGANIZATION

WHO has concentrated on tuberculosis, malaria, and infectious disease control, as well as strengthening the North Korean public health and medical system.

Specialization According to Recipient Country Needs

Health aid projects proposed by WHO have been diverse and often conducted in a timely manner in response to health needs. Beginning in 1998, WHO started the Directly Observed Treatment, Short-course (DOTS) program to eradicate tuberculosis in the DPRK. From 1998 to 2010, WHO has steadily provided almost 90 percent of the requested amount of TB medicine [7]. Indeed, the DOTS program in the DPRK has improved the TB case detection rate and treatment completion rate above the recommended standard.

In 2004, WHO provided technical and financial support in preparation for avian influenza [7]. In 2010, WHO also provided technical support for the National Malaria Control Strategy. Currently, WHO is working with the Global Fund as the principal recipient for tuberculosis. WHO also published a "WHO country cooperation strategy, DPR Korea" periodically in conjunction with the DPRK's Ministry of Public Health to prioritize major health issues. In several of these documents, WHO emphasized the importance of strengthening the country's health system.

WHO seemed to set a high standard of professionalism, especially regarding infectious disease control in the DPRK. Again, despite the important role WHO undertook in the DPRK, it was difficult to find official records of previous projects, either online or through email requests. More data should be made more easily accessible to the public so as to facilitate collaboration among other donor countries and to aid in future policy making.

THE GLOBAL FUND TO FIGHT AIDS, TUBERCULOSIS AND MALARIA

The Global Fund focuses on the treatment and eradication of malaria, tuberculosis, and HIV/AIDS. Their health aid projects to the DPRK directed at the eradication of malaria and tuberculosis began recently in 2010 and have continued to the present. It is important to note that the Global Fund has been dramatically increasing its funding role in the DPRK. The total amount of aid allocated for tuberculosis has reached almost 21 million US dollars; the Global Fund has also secured 13 million US dollars in health aid to treat malaria. For projects such as national TB control, it is crucial to approach the problem at a national level covering the total population. If not, alternative outcomes such as increasing the resistance to the treatments provided may occur. Currently, GFATM is providing large scale projects with continuity toward the DPRK and this should be highly appreciated.

High Quality and Framework for Monitoring and Evaluation

The Global Fund adheres to strict requirements regarding a

country's monitoring and evaluation (M&E) plan at the national level before it approves any funding. This M&E system plays a critical role in the structure of the Global Fund's performance-oriented funding. Performance-oriented funding was initially created to ensure that the decision to fund would depend on the measurement of transparent results in order to reach a certain goal within a specific timeframe [8]. When considering GFATM projects carried out in the DPRK, the selection of health outcome indicators is crucial, since the general North Korean population has a high risk of drug-resistance to first-line TB medication. We assumed that the ability to evaluate the progress and outcome of a specific project actually depends on the range of accessibility of the principal recipient and sub recipient. In the case of the Global Fund, they are both WHO and UNICEF. Therefore, close cooperation is necessary from the beginning, starting with the assessment of baseline study parameters and final outcome indicators of the project.

HEALTH AID FLOW FROM THE REPUBLIC OF KOREA

According to official data from the ROK's Ministry of Unification, from 1997 to 2011, the total amount of unconditional aid given to the DPRK by the ROK was 2.178 million US dollars. The portion of that total aid allocated to health has increased from 5% (1997 to 1999) to 12% to 23% (2007) [9].

Since 2000, the DPRK has made many appeals for the international donor community to redirect their focus from humanitarian aid to developmental aid, which the DPRK believed to be a more neglected sector. In response to these appeals, we saw that the ROK had redirected their health resources accordingly (Figure 3). We also reclassified CRS code 12230 (basic health infrastructure) into a "developmental health aid" code. We can see in Figure 3 that after 2004, the portion of developmental aid accounted for more than 50 percent of the total aid given in that year. From 2007 to 2009, developmental aid dramatically increased compared to medical equipment aid (humanitarian aid). In order to analyze the composition of Medical Equipment Aid and Developmental Health Aid, we reclassified CRS purpose code 12220 (basic health care) into a "medical equipment aid" code. By redefining the purpose codes, we can show how ROK upheld the DPRK's request for more development aid.

Health aid provided by the ROK to the DPRK is composed of funding from the Inter-Korean Cooperation Fund, private organizations, and local governments (Figure 4). Private organizations played a major role in health aid to the DPRK until 2005. It was at this point that the Inter-Korean Cooperation Fund increased its funding by 45%, thereby surpassing South Korean private organizations and local governments in health aid. However, with the inauguration of Lee Myung Bak in 2008, the amount of total aid rapidly decreased due to his government's strict stance of discontinuing any and all South Korean aid toward the DPRK.

We analyzed the 31 private organizations that conducted public health and medical aid efforts in DPRK from 2000 to 2010. We then compiled a list of 16 groups whose total amount of health aid exceeded 300 000 US dollars. The remaining 15 organizations' volume of health aid was relatively trivial (Figure 5). Among the 16 private organizations listed in Figure 5, the Eugene Bell Foundation funded the largest amount, reaching 5.68 million US dollars. Good Neighbors, the Korea Peace Sharing Movement, and the Okedongmu Children in Korea followed in decreasing order.

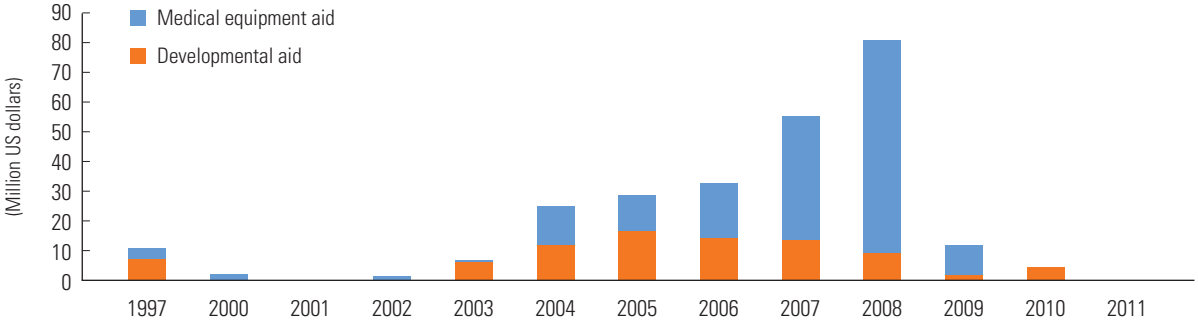

Figure 3. Medical equipment aid versus developmental health aid from the Republic of Korea to the Democratic People's Republic of Korea (among the Inter-Korean Cooperation Fund). From Ministry of Unification. White paper of the inter-Korean cooperation fund 2008 [10]; Ministry of Unification. Statistics of inter-Korean cooperation 2008-2011 [11].

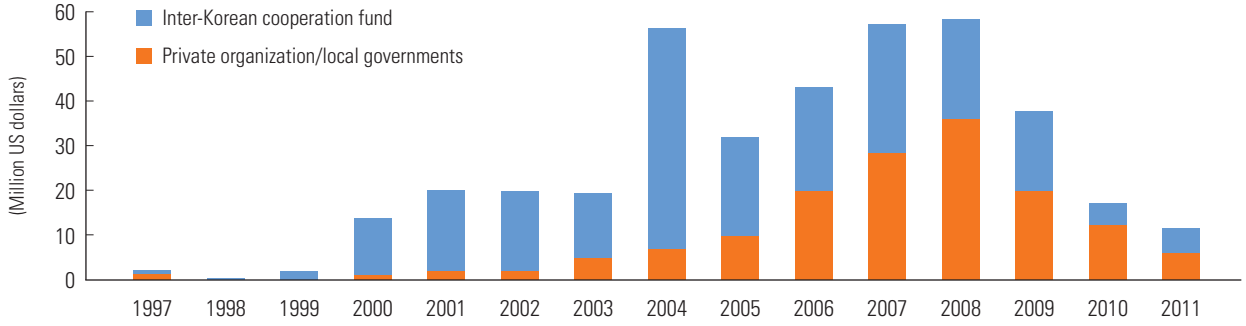

Figure 4. Status of health aid from Republic of Korea. From Ministry of Unification. White paper of the inter-Korean cooperation fund 2008 [10]; Ministry of Unification. Statistics of inter-Korean cooperation 2008-2011 [11].

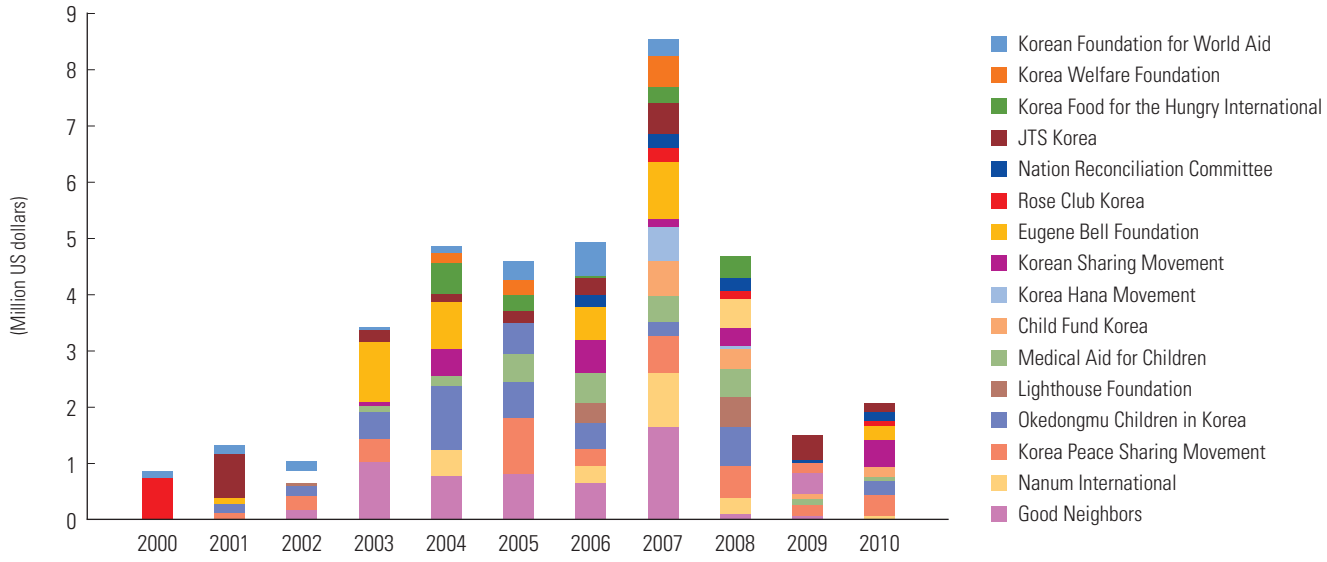

Figure 5. Domestic nongovernmental organizations' status of Individual Health Aid Projects. From Ministry of Unification. White paper of the inter-Korean cooperation fund 2008 [10]; Ministry of Unification. Statistics of inter-Korean cooperation 2008-2011 [11].

In our analysis of the private organizations by year, the number of private organizations tended to increase as the volume of total health aid increased (Figure 4). Since 2008, the number of actual donor organizations increased, despite the fact that the total amount of health aid from ROK decreased. This result strongly suggests that a centralized entity is needed to coordinate all the various players.

CONCLUSION

Humanitarian aid from the international community toward DPRK sharply decreased in 2000, just after the United Nations joint statement announcing its withdrawal from the DPRK in 1999. After the DPRK was eliminated from the United Nations' list of aid recipient countries in 2005, humanitarian aid from international society toward the DPRK continually decreased. In contrast to such worldwide trends, however, aid from the South Korean government has steadily increased since 1996 [9].

This study has demonstrated the crucial role that the ROK continues to hold with regard to health aid toward the DPRK. Quantitatively, the ROK was the largest donor, yet they have continually shown flexibility in adapting their project topics in response to requests made by the recipient country. In addition, the ROK has shown that it acts independent of international aid trends; they are instead more affected by the regime and inter-Korean relations as a whole.

International health aid from many international organizations has decreased, but UNFPA, UNICEF, WHO, and the Global Fund continue to maintain their focus on reproductive health

and infectious diseases.

As the leading donor, the ROK should consider the existing health needs of the DPRK not just as a recipient country but also as a potential partner for future collaboration and integration as well. In short, its health aid strategy should also be based on this principle.

Secondly, the flow of aid toward the DPRK should maintain continuity, particularly in the field of health. Since the international community's attitudes toward the DPRK are very complicated, for a various reasons, aid toward the DPRK is always vulnerable. As a major donor country, the ROK should continue to provide health aid regardless of external internationally politicized factors.

Lastly, the ROK should take the role of facilitator between the international organizations, the DPR Korean government, and the domestic NGOs. Each agency has individual priority and strength. The ROK should be another organizer along with the recipient country for the harmonization of diverse and fragmented health aid. The DPR Korean government also has their own priorities regarding health issues. This should be reflected as the ROK carries on the role of the coordinator.

Our study has some limitations. We concentrated our analysis on health resources only; therefore, we do not address the effectiveness of health aid given to the DPRK. Furthermore, we determined the key players in accordance with the total amount and the continuity of their health aid toward the DPRK, as well as any unique characteristics specific to that donor institution. We did not identify key donors based on how effectively a donor institution's health aid met the health needs of the DPRK.

Our study considered gross disbursements of health aid toward the DPRK according to figures voluntarily reported by the donors to CRS and FTS. We, therefore, relied on existing data from the financial systems of the donor institutions themselves. As such, the issue of incomplete and missing data naturally arises. Some of the donors may not be accurately reporting their gross disbursements to OECD's CRS system and/or CRS may not be accurately recording given data. To counter these gaps in data, we examined all available annual financial reports and official project reports for each of the key donor institutions to confirm that the CRS data is supported by each donor institution's individual data.

Further research into the National Health Accounts and Health Sector Public Expenditure Reviews of the DPRK may have provided us with the most comprehensive method to track financial resources within the health sector at the national level. However, this search remains logistically and methodologically challenging with regard to the DPRK, considering the inherent security, lack of access, and institutional weaknesses.

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CONFLICT OF INTEREST

The authors have no conflicts of interest with the material presented in this paper.

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