

복지부문 정보화의 효과에 대한 시론적 논의 : 사회복지통합관리망을 중심으로

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The Effects of Informatization on the Social Welfare Sector: with a focus on the Integrated Social Welfare Management System

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요 약 사회복지통합관리망은 정부에서 제공하는 다양한 복지급여 및 서비스를 통합적으로 제공·관리하기 위한 정보시스템으로서 사회복지 행정의 효율화에 기여하고, 나아가 사회복지 전달체계를 개선하기 위하여 구축되었다. 사회복지통합관리망은 복지행정업무를 담당하는 지자체 사회복지공무원의 업무량을 경감시키고 일하는 방식을 개선함으로써 전달체계 효율화 측면을 강조하였으며, 이에 따라 정보화 평가 또한 복지행정업무를 효율성측면과 예산, 인력 감축 규모를 통해 실질적인 효과를 찾아볼 수 있다. 따라서 본 연구는 사회복지통합관리망 구축 및 운영에 따른 경제적 측면, 공급자 측면 그리고 수요자 측면에서 정보시스템의 효과를 살펴보고, 이에 따른 사회복지통합관리망의 실질적인 성과를 제시하였다.

주제어 : 사회복지부문, 정보화, 사회복지통합관리망

Abstract Integrated Social Welfare Management System is an information system that comprehensively manages information and services regarding diverse welfare benefits provided by the government. It is designed to improve efficiency of social welfare administration and the service delivery system. The system is found to have significantly contributed to efficiency of the welfare delivery system by reducing the workload of public officials who are responsible for welfare administration in local governments and changing the way they work for the better. This study analyzes the costs and benefits of the Integrated Social Welfare Management System and describes what it has achieved for the provider and recipients. The system has enhanced efficiency of the welfare delivery system and enabled case management, the function social welfare public officials are supposed to do. Ultimately, the system will play a key role in building a consumer-centered welfare administration environment in the future.

Key Words : Social welfare sector, Informatization, Social Welfare Integrated Management System

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1. Introduction

Korean Society has seen growing public demand for increase in both quality and quantity of welfare service and the trend of low fertility and population aging have gotten serious. In response, the government has expanded the budget to fill the needs. With the expansion of the welfare budget, the inefficiency of the welfare delivery system was pointed as a problem and followed by efforts to fix the problem. The importance of 3Es in social welfare – efficiency, effectiveness and economy – was highlighted. Widespread efforts were made to increase value for money of public finances. The importance of Information Technology brought about changes in delivery of social services, which called for a change in the provision of social welfare services. One such change is manifested in the form of the development of the Social Welfare Information System(Jeong, 2007; Lee, 2009).

Prior to developing an integrated information system, there were a number of problems with execution of welfare budgets such as duplicated receipt of benefits, administrative waste and corruption. Such problems occurred because the information system and the administrative process are not advanced enough despite increased welfare programs and budgets. Furthermore, clients have limited access to how the application is processed and when the services will be received, so, it failed to provide client-centered services. In the late 2000s, the low fertility rate and aging population emphasized the importance of social welfare in the Korean society. Improvement in the delivery system was demanded to achieve value for money in welfare services and to resolve problems arising from ineffective welfare policy implementations. Using advanced information technology in Korea, the need to integrate welfare benefits and services provided by governments and to build an effective information system has been discussed continuously (An, 2010).

This paper posits two basic perspectives, one for informatization and the other for its achievements produced in the social welfare sector in Korea. First, the delivery process of social welfare services, as part of the government reforms, have come under sustained pressure to achieve ‘value for money’ and to change the performance of the welfare delivery process; and to improve the quality of welfare services. Second, the effects of informatization reforms on the social welfare sector are discussed in terms of economic and administrative perspectives; and with reference to financial saving from the establishment of the system; benefit for providers; and customers in the social welfare delivery process. The paper concludes with a discussion of the key findings and some policy recommendations for the development of the system. Therefore, this paper intends to review the effects of the information system in the social welfare sector, by analyzing the impact of the system and the resulting improvement in social welfare delivery have on quality of welfare services.

2. Reforming in the Social Welfare Delivery System: Introducing an Information System

2.1 Informatization policy in the social welfare sector in Korea

The need for such an information system has been raised continuously since the 1990s. The need for an information system to support the service delivery process was also raised. During that period, however, establishment of an information system was not selected as a specific government agenda but merely remained as personal ideas of policy practitioners and the academia. In the late 2000s, the central government specified information system establishment as a government agenda. During this period, the central government specified the necessity, concept, and provided a rough direction and made a plan for such an

information system. For example, discussion on informatization of social welfare in Korea started with the establishment of the Basic Plan on the National Welfare Computerized System in 1990. Since 2000, the discussion has been expanded to look at how to increase efficiency of the welfare delivery system and narrow welfare information gaps. National welfare information system projects have been driven by the central government in Korea (An, 2010). Major examples include the Social Welfare Integrated Management System, Social Welfare Facilities Information System, U-care System for Living-alone Elderly, e-Haneul Integrated Information System(for funeral services), and Electronic Voucher Integrated Information System. Projects to close information gaps were also implemented through information education and support of information facilities and equipment. It is highly difficult to apply the so-called rules of algorithm to the field of social welfare as it cannot be easily objectified unlike other areas (Jeong, 2007). Nevertheless, the information system needs to be established in this field because of integration of services, which is attracting much attention in social welfare services recently. Service integration is to enhance efficiency in welfare administration and accessibility of consumers by providing a comprehensive array of services in a more efficient and simplified manner. In particular, horizontal and vertical integration are emphasized in the integration of social welfare services. The horizontal integration refers to connecting a customer to diverse services that the given customer is currently qualified for. The vertical integration means linking a customer to services that the person might need or be qualified for throughout his/her lifetime. As an example, take the case of a boy who lives in a single-parent family receiving benefits of the National Basic Livelihood Security System, – the government assistance for the poor in Korea – and who has conduct disorder and has committed violence in school. The horizontal integration in this case is to

connect the family to the programs of the Ministry of Gender Equality and Family for single-parent families and juvenile violent offenders, and mental health-related services provided by the Ministry of Health and Welfare targeting people with conduct disorders. The vertical integration would be to offer services that could reduce the likelihood of the boy developing anti-social personality disorder in adulthood (Lee, 2010). To achieve such integration, it is necessary to build a system for cooperation and coordination between service providers, re-define the role of the public sector and adjust services provided by each government Ministry. It is also essential to mutually share information on customer needs and history and available resources. And for that, information technology should be incorporated into social welfare.

2.2 Introducing a social welfare information system and the need of the system

The social security information infrastructure was established in order to provide beneficiary-oriented and customized welfare services. The goals of the system are defined as enhancing efficiency of welfare administration by local government, improving the recipients' sensory level of welfare, and delivering welfare service effectively. To establish the social security information system, strategies have been executed that achieve cooperative governance, integration and connection of public information, and standardization of the welfare system. First among these were the execution strategies for inter-ministerial cooperation. Cooperative governance is essential to connecting the works and functions of 293 welfare services run by 16 ministries. The system-to-system connection among ministries was a particularly necessary change as each ministry had operated its own system previously. Second, the execution strategies for integration and connection of public data needed to be addressed. In order to enhance data credibility and integration, as well as to prevent data

overlapping, omission, or inadequacy, the information system was managed as an integrated database through integration and connection of each ministry's information. Third, the execution strategy for standardizing welfare system arose. The services provided by the Ministry of Health and Welfare were central to initiating execution of standardized regulations regarding family type, questions for the means test, survey criteria.

welfare benefits and services is being felt weakly among the public for the size of expanded budget. Social welfare officials at city/county/district governments have difficulties in finding time to visit those in need and provide services like case management, overwhelmed by administrative work such as asset investigation and eligibility management of a large number of applicants. For that reason, qualified beneficiaries are sometimes left off from the list. In addition, there were also problems with efficient execution of welfare budgets such as fraudulent or duplicated receipt of benefits and corruption by officials. Such problems occurred because the information system and the administrative organizations are not advanced enough for efficient delivery despite increased welfare budget. In the past, local municipalities conducted income and property investigations of prospective recipients separately for each welfare project. So even between public officials it took more than two weeks to check the data the others have. It was administrative waste and the information retrieved from others was not comprehensive and reliable enough. Besides, there was room for corruption as seen in some cases where local government officials pocketed public money, using a false name bank account. It was possible because the benefits were not administered centrally but at the local government level so that information could not be shared smoothly and comprehensively between cities and provinces. In response to the need of the time, the establishment of the efficient welfare delivery system was selected as a national agenda in the presidential transition committee. As part of the effort to achieve the task, the Basic Plan on the Establishment of Social Welfare Integrated Management System was set up in April 2008. After the Information Strategic Planning(BPR/ISP) was developed and the infrastructure building of the System was carried out in two phases, the Social Welfare Integrated Management System opened on January 4, 2010. The Social Welfare

<Table 1> Benefits of Social Welfare Informatization

Before the system	After the system
<ul style="list-style-type: none"> City, County, District, or Community Center each carried out both means test and benefits management 	<ul style="list-style-type: none"> City, County, District is in charge of means tests and benefits management Community Centers focus on searching for welfare cases, consulting, and visiting services Reinforced service integration team to facilitate integration of public and private services
Major changes in the welfare delivery process	

Korean government began to move away from existing pro-growth policies to expanding the ones focusing on enhancing quality of life, which facilitated quantitative and qualitative development of health and welfare policies. Out of the total government budget for 2010 at 292 trillion Korean won (260,397 million dollars), the budget for health and welfare was 81 trillion won(72,251 million dollars), accounting for 27.7% and the largest share by sector. The types of welfare benefits and services also increased to 299 programs in total including 147 programs by the Ministry of Health and Welfare. However, the effect of

Integrated Management System was created to make welfare administration more efficient and to pursue consumer-centered 'visiting welfare services', like visiting the field to discover new beneficiaries and providing diverse welfare services, which is the job pushed aside due to heavy workload in selecting and managing beneficiaries of public assistance for the poor. With the installation of the System, the Korea Health and Welfare Information Service(KHWIS) was set up in December 2009 in line with the article 6-3 of the Social Welfare Services Act as an organization to manage and operate the System. KHWIS started its work in full swing as the System was put in operation starting January 2010. In April, KHWIS took over the System from the Ministry of Health and Welfare.

2.3 Structure of the Integrated Social Welfare Management System

The Integrated Social Welfare Management System is the information system that comprehensively manages information on recipients of diverse social welfare benefits and services provided by the central and local governments and details of the support. The system pursues to conduct every step of work from receiving application to investigating income and property, to deciding eligibility, to paying benefits, and to following up on recipients, in a efficient and timely manner and bringing about savings on administrative energy and costs. The Integrated Social Welfare Management System mainly consists of Counseling and Case Management System, Integrated Welfare Benefits Management System, and Social Welfare Facilities Information System. The Counseling and Case Management System allows public officials at city, county, district governments to provide individual counseling and case management when they visit house-to-house, by accessing the System for information on income and asset data and benefits history of people. The Welfare Benefits Integrated

Management System is a business process system for receiving application for welfare benefits, investigating income and property, deciding eligibility, and paying benefits. To get income and property data of applicants, the system is connected to 35 institutions for 385 kinds of public data. The system also follows up on recipients. Changes in personal information of recipients is updated and information on the history of benefits of services that a person has received is coming from 16 organizations, which helps prevent fraudulent and duplicated receipt of benefits and services. The Social Welfare Facilities Information System manages information from private welfare facilities such as accounting and services provided and reporting to city/county/district governments. It is actually a separate system from the Integrated Social Welfare Management System. But the system provides benefit details and personal information of recipients for welfare facilities by connecting to the system. As an example, consider the recipient selection part and post-management of recipient part of the System. The former involves investigating income and property, determining eligibility and paying benefits. For efficient administration, 385 kinds of public data come from 35 institutions to the system. For post-management of recipients, the system is connected to 16 organizations for changes in personal information of recipients and information on the history of benefits or services that a person has received, to prevent fraudulent and duplicated receipt of benefits and services.

Specifically, the system is composed of Counseling and Case Management System, Integrated Welfare Benefits Management System, and Social Welfare Facilities Information System. Based on the three systems, case management, application processing, income investigation and eligibility decision all have become possible in the system. The history of services received and personal information which used to be managed individually is now merged at the household level.

<Table 2> Benefits of Social Welfare Informatization

	standard	Details	Analyzed data
Finance	Efficiency	Cost saving and increased value for money from informatization	Publications by the Ministry of Health and Welfare
Providers	Accuracy	Accuracy in selecting beneficiaries and calculating benefits	Data on benefit eligibility determination and benefit amount changes
	Swiftiness	Swiftiness in business process	Data on request and receipt of public data
	Responsiveness	Responsiveness to welfare needs of recipients	Data on case management and counseling provided at the most basic administrative unit
consumers	Integration	Integration in the provision of benefits and services	Data on applications of multiple services at a time
	Convenience	Swiftiness in paying benefits	Data on the amount of time taken from benefit application to payment
	Connectedness	Connectedness to benefits and services	Data on connection of benefits and services based on initial counseling

3. Analysis Framework

The benefits of the Social Welfare Integrated Management System are two-fold. One is the direct benefit from the integrated system itself, which has enhanced functions and provides better business support. The other is indirect benefit from the impact of the System has on policy implementation. Direct benefits include financial effect and increase in efficiency of welfare administration. Indirect benefits can be examined from providers' and consumers' perspectives. For providers, the system helped them enhance efficiency by expanding shared use of information in conducting social welfare businesses. This paper has classified these benefits into accuracy in the selection of recipients and calculation of benefits,

swiftness in income and property investigation, and responsiveness to the needs of recipients. The benefits from the perspective of recipients are looked at in terms of integration in benefits application; convenience in benefits receipt; and connectedness between benefits and services.

This paper has examined the effects of the System from financial, providers' and consumers' points of view, centered around six different social security programs (National Basic Livelihood Security Scheme(NBLSS), Basic Old-age Pension, child-care support, support for marginally poor persons with disabilities, single-parent family support, and self-sufficiency support for the marginally poor).

4. The Effects of the System in the Social Welfare Sector

4.1 Financial saving from the establishment of the system

The Integrated Social Welfare Management System was launched by the Korean government as a publicly-funded major innovative project on welfare information. The system is clearly aimed to enhance efficiency in implementing large-scale social welfare projects such as NBLSS, Basic Old-age Pension and child care so that it can prevent improper budget execution, actively discover qualified beneficiaries and arrange them to receive benefits, and support work to provide diverse services for eligible persons. As the System began up and running, it has realized benefits in many ways. This section will show how much welfare budgets were saved through cost-benefit analysis of the System.

The Basic Plan on the establishment of the Integrated Social Welfare Management System was developed to build an efficient welfare delivery system. And the system opened in January 2010. If we look at how much money was injected to the installation of the

system, 25.6 billion won and 10.7 billion won of budgets were executed respectively in 2009 and 2010. Additionally, 9.9 billion won was spent on labor costs and 3.2 billion Korean won for the other operation costs. Meanwhile, as for the benefit from the creation of the System, it has produced 328.7 billion won in benefit by preventing improper pay-outs through improved income and property data, 43.1 billion won by raising accuracy in income estimation, and 1.2 billion won through visiting services.

Financial saving from the system, among others, came from preventing benefits from going to unqualified persons and frontline social welfare public officials from making arbitrary decisions. Around the launching of the system, modifying income and property data and removing duplicated receipt of benefits were carried out on two occasions. As a result, 179,000 out of 7,151,000 benefit recipients were found to be unqualified and removed off the list. By updating income and property data on the system, an estimated 328.7 billion won was saved. It is because the process of beneficiary investigation and selection became more accurate and strict with the connection of comprehensive data. As the system connects 385 different kinds of public data from 35 organizations, it is increasing accuracy in determining the amount of benefits to be paid to recipients. How much was saved from this can be calculated by finding the rate of recipients who have their benefits reduced. As the system helps administrative work related to beneficiary investigation and selection, local government officials are now spending more time in paying a visit to the field for more and better services. The number of visiting services provided per social welfare official is found to have increased by 1.8 compared to the 2009, when the System was not built yet. The benefit from this amounts to around 1.2 billion won annually. To sum up, an estimated 11.3 billion won was injected annually in relation to the establishment of the system. The benefit is estimated at 373 billion won. These

points to net benefit worth are approximately 361.7 billion won. The estimation shows that the Integrated Social Welfare Management System is a highly cost-effective information project and that it has produced increased benefit in many ways. In particular, the system is regarded as having a positive impact on efficiency of welfare financing, as it has strengthened beneficiary selection and post-management.

4.2 Benefit for providers

Prior to the operation of the System, it was practically impossible for officials to update information on recipients because they were already overwhelmed by work involving beneficiary selection. However, the system has enabled regular update of personal and income, property information of beneficiaries, improving accuracy in benefit amount calculation. For example, in 2009, before the launching of the System, an average 156,209 cases of benefit amount adjustment of NBLSS were made every month. In 37.68% of the cases, the size of benefit increased. Benefit reduction and suspension accounted for 53.99% and 8.33% respectively. Compare the figures to those after the introduction of the System. In 2010, there were 424,528 cases of benefit adjustment monthly on average. Of them, 49.12% were benefit increase cases, 47.70% benefit reduction, and 3.18% benefit suspension. Because the system regularly provided personal and income, property information of beneficiaries and such information was reflected in benefit calculation, the number of processed calculation per month increased dramatically as well as its accuracy. Moreover, though varying across types of programs, the time taken to receive public data for property investigation decreased, contributing to administrative efficiency. If we compare January and September 2010(after the introduction of the system), the time taken to receive financial data and general public data reduced overall(10.6% for financial data, 5.0% for general public data), enabling more swift processing of income and property

investigation.

There was also remarkable progress in computerizing administrative business and facilitating case management by local government officials. The number of counseling provided for case management showed overall increase despite some monthly fluctuation(7.3 cases in January 2010 → 78.4 cases in September 2010).

4.3 Benefit for consumers

Beneficiaries have enjoyed various advantages from the system. Above all, the system has made benefit application more convenient for applicants. For example, with the installation of the system, the connected data expanded from 15 kinds from 10 organizations to 385 kinds of data from 35 organizations. Because of increased information sharing, applicants need not to submit as many supporting documents as before. As most personal, income and property information required for benefit and service application has become available on the system, applicants do not have to hand in documents containing such information repeatedly. All they have to do is to provide a written agreement on the shared use of administrative information(for general public data) as well as a written agreement on the provision of financial information(for financial data). Now they can apply for diverse benefits and services more easily. Time saving from benefit application to receipt also raised convenience of beneficiaries. For example, it took a relatively long time from application to receipt in January 2010, when the system was first opened. But the interval narrowed steadily and the child care support project saw the largest drop among many programs by 61.6% between January and September 2010. Overall, 53.8% was reduced on average.

The welfare database which used to be built at the local municipality and project level was overhauled to be structured at the individual and household level. Standardization of income and property investigation of

each project has also facilitated integrated beneficiary selection. In the past, the recipient selection of welfare benefits and services was conducted separately for each project so people made application one for each. However, as selection has been combined since the introduction of the system, multiple applications have become possible at the same time. In 2009, before the opening of the system, there was an average of 0.4 cases per month where a local municipality received application for two services at the same time. It was 0.2 cases for three services, and 0.1 for both four services, and five or more services. Since the opening of the System, the numbers jumped sharply. For the first nine months of 2010, application for two at one time recorded 85.5 cases per month. It was 33.2 cases for three, 12.3 cases for four, and 7.1 cases for five or more services.

As the system better connects people to cash benefits and welfare services they are qualified for, more beneficiary-centered services are provided. In January 2010, when the system has just been opened, simple guidance(51.2%) and connection to benefits and services(48.8%) were provided at about the same rates. In September 2010, the portion of simple guidance decreased to 31.2% while connection to benefits and services increased to 68.8%.

4.4 Summarizing the effect of the ISWMS

The system has brought to administrative 3Es (effectiveness, efficiency and economy) and transparency as well as means test accuracy. Approximately 25.6 million dollar was provided for system establishment, with 9.9 million dollar for labor costs in 2009, totally 35.5 million dollar. In the mean time, the welfare budget was successfully saved by virtue of accuracy improvements in means test for selecting recipients and investigating income and asset data. By modifying income and assets data on the ISWMS, removing inappropriate receipts of benefits

were carried out. As a result, 179,000 out of 7,151,000 benefit recipients were found to be unqualified and removed off the benefit list. The welfare budget was thus saved by approximately 328.7 million dollar annually as a result. The budget savings were reused for the further eligible recipients, and are contributing to recipient satisfaction significantly.

In terms of administrative efficiency, the time required from application to determination on the delivery process was reduced from 50 to 17 administrative days after establishing the ISWMS. By virtue of real time inquiries of recipient records for the income and assets tests, the civil servants' workload reduced significantly. Furthermore, while 15 official data came from 10 agencies were used in the past for means test, 385 official data connected automatically from 35 central governments and public agencies, including the National Tax Service and the Ministry of Labor. The information about recipients is collected for a lawful purpose, so the ISWMS is bound by strict confidential law. The integrated information is currently used in order to improve the accuracy of the recipient selection and the quality of benefit provision. In terms of transparency, real-name service for delivering welfare benefits was implemented by conferring a distinct ID for each civil servant. Financial transparency was secured by preventing administrative corruption, embezzlement and duplicative benefits. It has produced financial results in saving annual budgets approximately 328.7 million dollar. As a core function of the ISWMS, 'one-stop customized information system' was promoted by connecting official data between agencies, allowing recipients to check and receive all available welfare payments and services quickly. The system enhanced the public satisfaction with welfare services. Welfare administration specialization and delivery process efficiency have been improved via the ISWMS along with increasing public access convenience and increasing the client satisfaction with welfare benefits and services.

5. Lessons and Conclusion

This paper has reviewed how the social welfare delivery system in Korea can be complemented and restructured using information technology, with a focus on the system, the major welfare information system. It has looked at the background and purpose of the system and its structure and major functions. It has also focused on how the system has improved welfare delivery and contributes to informatization of social welfare with supporting data. The purpose of the system is to improve the administrative efficiency upheld client centered welfare services and expand welfare service opportunities through efficient management of welfare budgets. In particular, an active public welfare service has been made available through delivery system improvement. The system is also promoted for the purpose of preventing administrative corruption and inappropriate budget execution and supporting various services to prepare a basis for comprehensive welfare benefits and services. In practice, the system is to manage information regarding income and assets test and individual service records of approximately 14 million recipients. The system has over 50% of information on welfare projects in Korea under its management. In particular, the system manages information on NBLSS beneficiaries, the marginally poor class, and their dependents in its database. The social welfare policies of Korea are mainly determined by the Ministries and executed by local governments. 230 local governments are delivering 159 welfare payments and services on the behalf of many other ministries through the system, and from 2013, all welfare services executed by central ministries will be implemented through the system. If the System is extended to cover social welfare related projects conducted by other Ministries, the system could be leveraged to provide more comprehensive services in the field of health and welfare.

One of the advantages of the Integrated Social

Welfare Management System is that it can minimize possible errors by having every process from application to payment to post-management on the computerized system. However, as the system is to develop into the central pillar of the welfare delivery system in Korea, it needs to focus on consumer-centered service provision. Currently, applicants have to visit community centers for submitting application forms, causing the unintended stigma effect. Though the system has enabled rapid processing of benefit application, payment and post-management, application is still made through community centers. Furthermore, applicants have limited access to how the application is processed and when the services will begin. To solve the problems, more customer-centered approach is required. To be more specific, online application should be possible first of all. If they are allowed to make application at home using a welfare portal and notified the decision online, the stigma effect could be prevented. To make it more user-oriented, it should enable applicants to have easier access to information they need and monitor how the application is being processed. Second, institutional reform is to be arranged so that welfare projects carried out by many different Ministries and agencies can be implemented through the System. In particular, if unemployment benefit, vocational training and job placement services that the Ministry of Labor is currently responsible for are also integrated into the System, it will make welfare services more customer-focused.

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