

Impact of Income Transfers on Poverty Reduction in Korea

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ABSTRACT As a policy evaluation research, this study investigates the relationship between income transfers and the income security of the poor in Korea. Employing Beckerman's poverty reduction effect model, this study examines the impact of social and private income transfers on poverty rate and poverty gap reduction. Particularly, this study compares poverty reduction dynamic between working poor and non-working poor. This study analyzes a representative panel data, Korean Labor and Income Panel Study (KLIPS). Results reveal that income transfers show a relatively higher poverty reduction among the non-working poor than the working poor, indicating that both social and private income transfers have been concentrated on the non-working poor. However, the difference in the poverty reduction effectiveness of income transfers between the non-working poor and the working poor has decreased over time. The result also indicates private income transfers play more important role than public income transfers in Korean society.

INTRODUCTION: HISTORICAL BACKGROUND

The Korean welfare system has undergone a significant transformation since the 1997 Asian Economic Crisis (Kim 2006). As a result of the shock of the economic crisis, Korea's economic foundation collapsed after three decades of rapid growth. The macro economic index contracted from a positive 7.1 percent in 1996 to a negative 5.8 percent GDP growth in 1998, and the unemployment rate soared to a record high of over 10 percent in 1998 from about three percent before 1997 (Yang 2002). Economic deterioration rapidly increased societal welfare needs. Because Korea belonged to a typical "developmental welfare capitalist regime" in which the state was minimally engaged in welfare activities, relying on the principles of self-reliance and family assistance (Holliday 2000), the existing welfare system could not handle the unexpected economic collapse and resulting social emergency. Thus, Korean society faced two concurrent challenges: reconstruction of the economic infrastructure and expansion of the social security net (Shin 2000).

To overcome the new challenges, Korean government launched a new policy initiative called "Productive Welfare" (Kim 2001). On one hand, progressive groups in the administration, such as the Presidential Policy Advisory Com-

mittee, and civil organizations asserted that the Korean welfare system should be expanded to cope with the social emergency by employing a comprehensive social-democratic welfare model. On the other hand, conservative groups, represented by technocrats in the administration, insisted that welfare policy should be strongly tied to work incentives in order to minimize welfare dependency. Emphasizing the "welfare disease" of the Western welfare states, these conservative technocrats believed that welfare expansion induces low labor productivity and an unmanageable increase in social expenditures (Lee 1999). Productive Welfare was an outcome of the compromise between these two antagonistic political agendas (Kwon 2002). While Korean government agreed to extend the sphere of state welfare activities, it tried to minimize welfare dependency by connecting welfare to work.

The introduction of the National Basic Livelihood Security Act (NBLSA) in 1999 embodied the Productive Welfare ideology (Choi 2000). This new Act replaced the existing Public Assistance Program (PAP), the main pillar of Korean anti-poverty policy during past four decades. In contrast to the PAP, NBLSA expanded the range of welfare entitlements by abolishing the demographic test (Ministry of Health and Welfare 2003). In addition to the introduction to the NBLSA, Korean government launched the integrated National Health Insurance system and extended the National Pension coverage to the

entire population. Furthermore, Korean government also extended the coverage of the Unemployment Insurance and Industrial Accident Compensation Insurance to all types of employees. Hence, compared with the previous welfare system in Korea, the most unique characteristic of the Productive Welfare initiative is that the state provides welfare benefits to working people with low incomes.

Korean society had successfully reduced the poverty rate by exclusively depending on stable and rapid economic growth since the 1997 Asian Economic Crisis (Song 2002). Neo-liberal economic reforms after 1998, however, destabilized the labor market structure and decreased the average wage level of the entire labor force, and therefore, produced a large group of people who were working but poor (Shin 2013). As a result, the working poor have increasingly become the main target population of the social welfare system. Although the Korean government has considerably increased the size of the welfare state in terms of the governmental budget since the 1997 Asian Economic Crisis, many scholars still doubt whether the recent welfare reform efficiently copes with societal demand, such as the problem of the working poor (Jo 2001). Moreover, considering the rising share of social welfare expenditure in the government's budget, an appropriate evaluation of the policy effectiveness of the current social welfare system is required.

Aim and Significance of the Study

Against this background, this study investigates the relationship between income transfers and the income security of the working poor. The specific aim of this study is to analyze the poverty reduction effects of income transfers among the working poor from 1997 to 2005, during the economic crisis period (from 1997 to 2000) and the economic recovery period (from 2001 to 2005) after economic crisis. While the key target population of this study is the working poor, this study also investigates the poverty reduction effects of income transfers among the non-working poor. By comparing different patterns of poverty reduction effects of income transfers between the working poor and the non-working poor, this study is expected to reveal clearer poverty reduction dynamics among the working poor. Moreover no previous research com-

pared the poverty reduction effect of old public assistant program to the new program in Korea. As a policy evaluation research, this study empirically investigated the impact of income transfers on poverty reduction after the 1997 Asian Economic Crisis in Korea.

This study defines social income transfers as any kinds of cash benefits from the past Public Assistance Program (PAP), the current National Basic Livelihood Security Act (NBLSA), and social insurance programs. In addition to social income transfers, this study also pays attention to private income transfers, cash benefits from personal networks, such as families, relatives, friends, and community. As Hong (2002) argued, compared to other Western welfare states, one unique characteristic of the Korean welfare system is that the "private welfare" provided by unofficial-personal networks has played an important role, instead of the "public welfare" provided by state. Previous research also reveals that private income transfers significantly affect poverty reduction in Korea (Hong 2002). Thus, this study investigates the poverty reduction effects of social income transfers and private income transfers respectively, comparing these two income transfers.

Moreover, within social income transfer scheme, this study pays special attention to the differences between the PAP and NBLSA cash benefit in terms of poverty reduction effects among the working poor. Although the NBLSA has been implemented for several years, there has been no empirical evaluation of the impact of the program as an anti-poverty mechanism for the working poor, the main target population of the program. As the first trial to empirically examine the impact of NBLSA, this study will provide social welfare scholars with a body of empirical knowledge for more in-depth arguments on the NBLSA as well as anti-poverty policies in Korea. The lack of evaluation research on the NBLSA has also prevented policy makers from improving the effectiveness of the anti-poverty programs. As a policy evaluation research, this study will assess whether the NBLSA achieves its intended goal, alleviation of the poverty problem among the working poor. Based on the findings of evaluation, this study will provide policy makers with guidelines for evidence-based policy implementation.

Therefore, this study is expected to significantly improve academic understanding of the

scope of anti-poverty policies in Korea, and to propose an adequate policy direction for more effective anti-poverty programs. The findings from the study will not only contribute to Korean social and economic well-being, but are likely to inform the content of anti-poverty policies in other developing welfare states as well.

THEORETICAL FRAMEWORK

Conceptualization of Poverty

Generally, when material resources in a household fall short of fulfilling the family needs for survival, such as food and housing, individuals belonging to the family are classified as poor (Burtless and Smeeding 2001). Social scientists have developed two approaches to defining a material poverty concept: an absolute and a relative approach (Acs and Loprest 2004). An absolute poverty approach calculates basic economic needs according to the market price of the necessities of life, such as food, clothing, and housing (Burtless and Smeeding 2001). As such, this approach is insensitive to the degree of economic inequality within a given society because it just concentrates on the economic deprivation facet of poverty (Levitan et al. 2003). Despite this weakness, an advantage of an absolute poverty approach is that scholars can scientifically measure families' basic needs. An absolute poverty approach emphasizes that the concept of poverty should be measured by an "absolute cash amount" with which a family can satisfy basic economic need.

A relative poverty approach is more reliable in comparative studies because many developed countries do not have absolute poverty lines or have different estimation methods. For these reasons, most European poverty researchers use 50 percent of "median national equivalent disposable income" as their poverty threshold (Goodin et al. 2003). However, it is difficult to measure objective families' basic needs with a relative poverty approach because there is no scientific reference for scholars to decide on an appropriate income level. For this reason, poverty researchers conducting a single nation study tend to depend on an absolute poverty approach rather than a relative poverty approach (Blank 1996; Kim and Kim 2013). As the aim of this study is examining poverty phenomena in one country, Korea, this study employs an ab-

solute poverty approach to defining the concept of poverty. Particularly, this study used Minimum Living Standard (MLS) of Korea as a poverty line. Thus, a household whose income is below the MLS is regarded as poor in this study.

Measurement of Poverty Reduction Effects

The poverty reduction effect assesses the difference between pre-income transfer poverty and post-income transfer poverty (Ozawa 1995). The evaluation of poverty reduction effects is divided into two specific methods, the poverty rate based method and poverty gap based method, according to how to measure the poverty phenomenon (Goodin et al. 2003; Scholz and Levine 2001). This study employs both methods to measure the poverty reduction effect of income transfers.

The first method, the most immediate and simplest way, is to compare the difference between the pre-income transfer poverty rate and the post-income transfer poverty rate. Since this study uses households as the unit of analysis, changes in the poverty rate of households before and after income transfers is defined as the poverty reduction effectiveness. The poverty reduction effect model developed by Beckerman (1979) is very useful to explain the concept of poverty reduction effect.

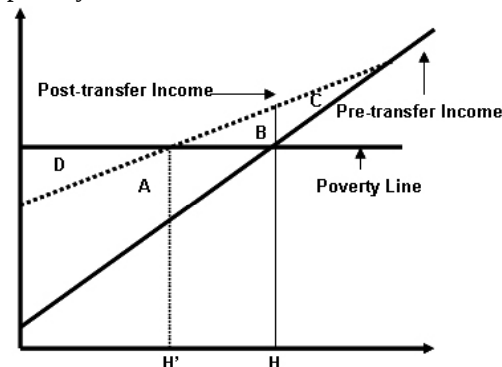


Fig. 1. Model for poverty reduction effect

Figure 1 depicts the basic notion of measuring poverty reduction effects. The horizontal axis represents a percentile of household income and the vertical axis represents the level of income. The solid line refers to pre-transfer income and the dotted line represents post-transfer income

respectively. The solid line parallel to the horizontal axis refers to the poverty line of a given society. A, B, C, and D refer to the areas that are divided by the lines. The shaded area represents A. Thus, poverty reduction effect related to the poverty rate may be presented by the equation (1), based on the poverty reduction effect model in figure 1. In equation (1), H represents the poverty rate based on pre-transfer income while H' refers to the poverty rate based on post-transfer income. Hence, the poverty rate reduction effectiveness can be estimated by subtracting H' from H and being divided by H .

Poverty rate reduction effectiveness = $(H - H') / H$ Equation (1)

An alternative way to examine the poverty reduction effects of income transfers is to look at the degree to which income transfers affect the poverty gap (Levitan et al. 2003). The poverty gap is defined as the sum of the differences between market income and the poverty line for all families with incomes below the poverty line (Scholz and Levine 2001). In the same vein, the poverty gap refers to the total amount of money that should be given to households to bring them up to the level of the poverty line (Milanovic 2002). Thus, researchers can estimate poverty reduction effects by comparing the pre income transfer poverty gap and the post income transfer poverty gap. Poverty reduction effects pertaining to the poverty gap may be presented by the equation (2), based on the poverty reduction effect model in Figure 1.

Poverty gap reduction effectiveness = $\frac{D}{(A+D)}$
Equation (2)

In equation (2), $(A+D)$ and D represent the pre-transfer poverty gap and post-transfer poverty gap respectively. By dividing the post-transfer poverty gap by the pre-transfer poverty gap, researchers can calculate a poverty gap ratio. As the poverty gap ratio standardizes the impact of income transfers on the poverty gap, it provides more exact information about the poverty reduction effects of income transfers (Mitchell 1991). Thus, this study employs the poverty gap ratio as another metric to estimate the poverty reduction effects.

METHODOLOGY

Research Model

To examine the poverty reduction effects of income transfers, each year's differences in the

poverty rate and aggregate poverty gap between the post-income transfers and pre-income transfers will be compared. In addition, to examine the impact of the National Basic Livelihood Security Act (NBLSA) on the poverty reduction effects, the average poverty reduction effects of the pre-NBLSA years, from 1997 to 2000 (t_1 to t_4), will be compared to the average poverty reduction effect of the post-NBLSA years, from 2001 to 2005 (t_5 to t_9). Equation (3) shows the main research model of the study.

$$= \frac{\text{Average (PovertyreductionEffect)}_{t_1 \sim t_4}}{\text{Average (PovertyreductionEffect)}_{t_5 \sim t_9}}$$

Impact of NBLSA Equation (3)

Data

This study uses the Korean Labor and Income Panel Study (KLIPS). The KLIPS is a longitudinal study of a representative sample of individuals (men, women, and children) and the family units in which they reside. It emphasizes the dynamic aspects of economic and demographic behavior, but its content is broad, including sociological and psychological measures. At the beginning year's (1998) data collection, the KLIPS collected information about more than 13,000 individuals and 5,000 households. KLIPS is the only panel data produced by the government in Korea. The entire process, including data collection and data management, is conducted by Korea Labor Institute, an official government institution. By 2008, seven survey years of data, from 1998 to 2004 (time 1 to time 7), were constructed and publicly opened.

RESULTS

Poverty Rate and Poverty Gap Reduction Effectiveness

Table 1 presents the poverty rate reduction effectiveness of income transfers by year. Each cell shows how much income transfers reduces the pre-income transfer poverty rate in a given year, adjusting for the size of the pre-income transfer poverty rate.

During the nine-year period, the overall poverty rate reduction effectiveness of social income transfers is an average of 10.2 percent, while that of private income transfers is an average of 15.3 percent. This implies that both social income transfers and private income transfers reduce the pre-income transfer poverty rate by

Table 1: Poverty rate reduction effectiveness of income transfers by year (%)

	<i>Average</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>
<i>Social Income Transfers Only</i>										
Overall poverty rate	10.2	¹⁾	4.6	5.8	7.0	9.3	8.8	8.9	10.4	12.7
Non-working poor rate	8.8	¹⁾	4.3	6.9	8.3	10.5	10.2	10.4	11.2	13.0
Working poor rate	9.7	¹⁾	5.6	6.6	5.7	9.1	8.3	6.0	9.4	12.2
<i>Private Income Transfers Only</i>										
Overall poverty rate	15.3	¹⁾	12.0	8.5	9.9	11.0	10.3	12.9	21.7	22.5
Non-working poor rate	17.7	¹⁾	15.2	11.8	10.2	11.4	12.0	14.4	25.6	26.0
Working poor rate	12.6	¹⁾	9.6	6.6	8.6	10.4	8.3	11.0	17.7	18.9
<i>Total Income Transfers</i>										
Overall poverty rate	21.3	10.6	17.1	16.1	16.4	21.4	19.6	22.2	34.4	36.6
Non-working poor rate	24.8	14.0	20.7	20.6	18.5	22.9	23.1	26.4	40.0	40.7
Working poor rate	17.5	7.7	14.4	12.3	14.3	18.2	15.6	17.0	27.1	31.1

¹⁾ The first survey questionnaire did not ask about the source in income transfers. So it is impossible to specify social income transfers and private income transfer.

10.2 percent and 15.3 percent respectively. Furthermore, taking into consideration both social income transfers and private income transfers, the overall poverty rate reduction effectiveness of total income transfer is an average of 21.3 percent. The results also indicate that the poverty rate reduction effectiveness of social and private income transfers has increased since 1998. In fact, the poverty rate reduction effectiveness of social income transfers increased from 4.6 percent in 1998 to 12.7 percent in 2005. During the same period, the poverty rate reduction effectiveness of private income transfers also increased from 12 percent in 1998 to 22.5 percent in 2005. Larger poverty rate reduction effectiveness indicates a reduction in the poverty rate due to income transfers.

Another finding is that different types of income transfers affect the non-working poor and the working poor differently. While the average poverty reduction effectiveness of social income

transfers for the working poor is 9.7 percent, the average poverty reduction effectiveness of social income transfers for the non-working poor is 8.8 percent. On the other hand, while the average poverty rate reduction effectiveness of private income transfers for the working poor is 12.6 percent, the average poverty rate reduction effectiveness of private income transfers in the case of the non working poor is 17.7 percent. These results show that compared to private income transfers, social income transfers are more effective for the working poor than for the non-working poor in terms of poverty gap reduction.

Table 2 presents the poverty gap reduction effectiveness of income transfers in the order of the year. During the nine-year period, the overall poverty gap reduction effectiveness of social income transfers is an average of 10 percent, while that of private income transfers is an average of 16.4 percent. Considering social income transfers and private income transfers at the

Table 2: Poverty gap reduction effectiveness of income transfers by year (%)

	<i>Average</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>
<i>Social Income Transfers Only</i>										
Overall poor	10.0	¹⁾	3.3	5.4	8.6	11.5	11.2	11.6	13.9	14.4
Non-working poor	11.2	¹⁾	4.7	7.0	9.9	11.9	12.7	12.7	15.0	16.0
Working poor	6.7	¹⁾	1.6	2.5	4.9	9.3	7.4	7.1	10.1	10.5
<i>Private Income Transfers Only</i>										
Overall poor	16.4	¹⁾	12.3	16.4	12.5	16.5	13.0	16.0	22.3	22.3
Non-working poor	20.7	¹⁾	17.5	21.3	15.7	19.1	16.3	20.7	27.6	27.0
Working poor	6.4	¹⁾	3.7	6.2	5.4	9.1	5.7	4.1	7.7	9.1
<i>Total Income Transfers</i>										
Overall poor	25.6	12.5	16.1	22.0	22.0	28.8	24.5	29.1	37.5	37.5
Non-working poor	31.1	14.8	22.8	27.6	26.6	32.4	29.8	35.7	45.2	45.1
Working poor	11.9	4.1	5.5	9.2	10.9	17.3	12.7	11.6	17.9	18.0

¹⁾ The first survey questionnaire did not ask about the source in income transfers. So it is impossible to specify social income transfers and private income transfer.

same time, the overall poverty gap reduction effectiveness of total income transfers is an average of 25.6 percent. This means that total income transfers reduce the pre-income transfer poverty gap by 25.6 percent, that is, if pre-income transfer poverty gap is \$1,000, income transfers reduce the poverty gap to \$744 (=1,000 - 25.6*1,000).

Similar to the poverty rate reduction effectiveness, the poverty gap reduction effectiveness of social and private income transfers has increased since 1998. The overall poverty gap reduction effectiveness of social income transfers increased from 3.3 percent in 1998 to 14.4 percent in 2005. During the same period, the overall poverty gap reduction effectiveness of private income transfers also increased from 12.3 percent in 1998 to 22.3 percent in 2005. Astonishingly, while the poverty gap reduction effectiveness of social income transfers among the working poor was only 1.6 percent in 1998, it increased by 650 percent in 2005. Another interesting finding is that the overall effect size of private income transfers for the non-working poor (20.7%) is three times the effect size for the working poor (6.4%).

The above results indicate that both social income transfers and private income transfers have reduced the poverty rate and poverty gap among the working poor as well as among the non-working poor. These results also show that the poverty reduction effectiveness of both social income transfers and private income trans-

fers has steadily increased over the nine-year period. During the same period, however, the increasing rate of social income transfers (for poverty rate reduction effectiveness at 276%, for poverty gap reduction effectiveness at 657%) is higher than private income transfers (for poverty rate reduction effectiveness at 187%, for poverty gap reduction effectiveness at 181%). In fact, even though social income transfers have expanded more rapidly than private income transfers, the overall poverty reduction effectiveness of private income transfers is still larger than that of social income transfers in Korea.

Impact of National Basic Livelihood Security Act (NBLSA) on Poverty Reduction

In order to compare the effect sizes of the poverty reduction effectiveness between the pre-and post-National Basic Livelihood Security Act (NBLSA) period, the average poverty reduction effectiveness of these two periods are compared.

Table 3 presents the average poverty rate reduction effectiveness between the pre- NBLSA period (from 1997 to 2000) and the post-NBLSA period (from 2001 to 2005). The upper three rows in the table compare the average poverty rate reduction effectiveness of social income transfers between these two periods. It is observed that while the average poverty rate reduction effectiveness of social income transfers was 5.8 percent during the pre-NBLSA period, it

Table 3: Comparison of poverty rate reduction effectiveness between pre NBLSA period and post NBLSA period (%)

	Poverty gap reduction effectiveness (% , standard deviation)			Test statistics (t-score, degree of freedom)	
	Entire period (1997-2005)	Pre NBMSA period (1997-2000)	Post NBLSA period (2001-2005)		
<i>Social Income Transfers Only</i>					
Entire poor	10.2 (1.3)	5.8 (1.2)	10.2 (1.6)	3.85	(6)**
Non-working poor	8.8 (1.6)	6.5 (2.0)	11.1 (1.1)	4.16	(6)**
Working poor	9.7 (1.4)	5.9 (.55)	9.0 (2.2)	2.89	(6)*
<i>Private Income Transfers Only</i>					
Entire poor	15.3 (3.5)	10.1 (1.7)	14.7 (5.9)	1.53	(6)
Non-working poor	17.7 (5.1)	12.4 (2.5)	16.9 (7.3)	1.21	(6)
Working poor	12.6 (3.1)	8.2 (1.5)	12.3 (4.7)	1.72	(6)
<i>Total Income Transfers</i>					
Entire poor	21.3 (5.2)	15.1 (2.9)	26.8 (7.9)	2.76	(7)*
Non-working poor	24.8 (5.6)	18.4 (3.1)	30.6 (8.9)	2.55	(7)*
Working poor	17.5 (4.7)	12.1 (3.1)	21.8 (6.8)	2.56	(7)*

* p<.05, **p<.01

increased to 10.2 percent during the post-NBLSA period. Furthermore, taking into consideration the non-working poor and the working poor separately, it is seen that the poverty rate reduction effectiveness is higher during the post-NBLSA period in both groups (for the non-working poor, it increased from 6.5% to 11.1% and for the working poor, it increased from 5.9% to 9.0%).

On the other hand, there are no statistically significant differences in the poverty rate reduction effectiveness of the private income transfers between the pre-NBLSA period and the post-NBLSA period (middle three rows in the table). Although the overall poverty rate reduction effectiveness of private income transfers increased from 10.1 percent during the pre-NBLSA period to 14.7 percent during the post-NBLSA period, this increase is not significant enough. These results indicate that the new social income transfers under the National Basic Livelihood Security Act (NBLSA) has a larger effect size of poverty rate reduction, compared to the old social income transfers under the Public Assistance Program (PAP).

Table 4 presents the average poverty gap reduction effectiveness between the pre-NBLSA period (from 1997 to 2000) and the post-NBLSA period (from 2001 to 2005). As seen in Table 4, the upper three rows compare the average poverty gap reduction effectiveness of social income transfers between these two periods. While the average poverty gap reduction effectiveness of social income transfers during the

pre-NBLSA period was 5.7 percent, it increased to 12.5 percent during the post-NBLSA period. Moreover, considering the non-working poor and the working poor separately, the poverty gap reduction effectiveness is higher during the post-NBLSA period among both groups (for the non-working poor, it increased from 7.2% to 13.7%; and for the working poor, it increased from 3.0% to 8.9%). However, there are no statistically significant differences in the poverty gap reduction effectiveness of private income transfers between the pre-NBLSA period and the post-NBLSA period (middle three rows in the table). Even though the overall poverty gap reduction effectiveness of private income transfers increased from 13.7 percent during the pre-NBLSA period to 17.0 percent during the post-NBLSA period, this increase is not significant enough.

These results indicate that the new social income transfers under the National Basic Livelihood Security Act (NBLSA) has a larger effect size of poverty gap reduction when compared to the old social income transfers under the Public Assistance Program (PAP). These results also indicate that there is no significant change in the effect size of private income transfers on poverty reduction between the pre- and post-NBLSA periods. These findings imply that the NBLSA has improved the effectiveness of social income transfers in terms of poverty rate reduction and poverty gap reduction.

Table 4: Comparison of poverty gap reduction effectiveness between pre NBLSA period and post NBLSA period (%)

	Poverty gap reduction effectiveness (% , standard deviation)			Test statistics (t-score, degree of freedom)
	Entire period (1997-2005)	Pre NBMSA period (1997-2000)	Post NBLSA period (2001-2005)	
<i>Social income Transfers Only</i>				
Entire poor	10.0 (1.9)	5.7 (2.6)	12.5 (1.5)	4.69 (6)**
Non-working poor	11.2 (2.2)	7.2 (2.6)	13.7 (1.7)	3.81 (6)*
Working poor	6.7 (1.5)	3.0 (1.7)	8.9 (1.5)	4.87 (6)**
<i>Private Income Transfers Only</i>				
Entire poor	16.4 (3.1)	13.7 (2.3)	17.0 (4.1)	1.11 (6)
Non-working poor	20.7 (3.5)	18.1 (2.8)	21.1 (4.9)	1.24 (6)
Working poor	6.4 (1.8)	5.1 (1.3)	6.1 (2.2)	1.44 (6)
<i>Total Income Transfers</i>				
Entire poor	25.6 (5.1)	18.2 (4.6)	31.5 (5.7)	3.72 (7)**
Non-working poor	31.1 (6.6)	22.9 (5.8)	37.6 (7.1)	3.30 (7)*
Working poor	11.9 (3.1)	7.4 (3.1)	15.5 (3.0)	3.85 (7)**

* p<.05, **p<.01

Relative Poverty Reduction Effect Size

Finally, this study compares the relative poverty reduction effect size between the social income transfers and the private income transfers. As shown in the previous results, the overall poverty reduction effectiveness of the private income transfers is about one and half times larger than that of the social income transfers during the nine-year period. However, the increasing rate of the poverty reduction effectiveness of social income transfers is higher than the private income transfers during the same period.

Table 5 presents the ratio of poverty reduction effectiveness of social income transfers to private income transfers. Each cell refers to the relative effect size of social income transfers, compared with private income transfers. For example, in 1998, the overall poverty rate reduction effectiveness of social income transfers was only 38 percent of private income transfers, indicating that private income transfers play a more important role in the poverty rate reduction among the entire poor population. Throughout

this period, the private income transfers overwhelm the social income transfers for both the non-working poor and the working poor in terms of the size of poverty reduction effectiveness. However, after 2001, the ratio of poverty gap reduction effectiveness for the working poor increased above one, indicating that, since 2001, the poverty gap reduction effectiveness of social income transfers has been larger than that of private income transfers.

In order to test whether the relative effect size of social income transfers and private income transfers change after the introduction of the NBLSA, this study compares the average ratio of the poverty reduction effect size between the pre- and post-NBLSA periods. Table 6 presents the results. Looking at the poverty rate reduction effectiveness, one can see that there is no difference between the pre-NBLSA and the post-NBLSA periods. On the other hand, there is a statistically significant difference in the poverty gap reduction effectiveness among the working poor between the pre- and post-NBLSA periods. While the average ratio of the

Table 5: Ratio of the poverty reduction effect size of social income transfers over private income transfers

	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Poverty Rate</i>									
Overall poor	⁻¹⁾	0.38	0.68	0.71	0.85	0.85	0.69	0.48	0.56
Non-working poor	⁻¹⁾	0.28	0.58	0.81	0.92	0.85	0.72	0.44	0.50
Working poor	⁻¹⁾	0.58	1.00	0.66	0.88	1.00	0.55	0.53	0.65
<i>Poverty Gap</i>									
Overall poor	⁻¹⁾	0.27	0.33	0.69	0.70	0.86	0.73	0.62	0.65
Non-working poor	⁻¹⁾	0.27	0.33	0.63	0.62	0.78	0.61	0.54	0.59
Working poor	⁻¹⁾	0.43	0.40	0.91	1.02	1.30	1.73	1.31	1.15

¹⁾ The first survey questionnaire did not ask about the source in income transfers. So it is impossible to specify social income transfers and private income transfer.

Table 6: Ratio of poverty reduction effect size between pre NBLSA and post NBLSA period (%)

	<i>Poverty gap reduction effectiveness (% , standard deviation)</i>			<i>Test statistics (t-score, degree of freedom)</i>
	<i>Entire period (1997-2005)</i>	<i>Pre NBLSA period (1997-2000)</i>	<i>Post NBLSA period (2001-2005)</i>	
<i>Poverty Rate Reduction Effectiveness</i>				
Entire poor	.65 (.16)	.59 (.18)	.68 (.16)	.75 (6)
Non-working poor	.63 (.22)	.55 (.26)	.68 (.21)	.61 (6)
Working poor	.71 (.19)	.74 (.22)	.72 (.21)	.15 (6)
<i>Poverty Gap Reduction Effectiveness</i>				
Entire poor	.60 (.20)	.43 (.22)	.71 (.09)	2.54 (6)*
Non-working poor	.54 (.16)	.41 (.19)	.62 (.09)	2.22 (6)
Working poor	1.01 (.45)	.58 (.28)	1.34 (.29)	3.43 (6)*

p<.05, *p<.01

poverty gap reduction effectiveness in the pre-NBLSA period was .58, it became 1.34 in the post-NBLSA period. These results show that the effect size of social income transfers on poverty gap reduction among the working poor outstrips that of private income transfers after the introduction of the NBLSA. This implies that the relative effect size of social income transfers and private income transfers has changed after the introduction of the NBLSA, especially among the working poor.

DISCUSSION

The results of the study reveal several implications. First of all, both social income transfers and private income transfers have reduced the poverty rate and the aggregate poverty gap among the working poor as well as among the non-working poor over the nine-year period in Korea. Moreover, the results also indicate that the poverty reduction effectiveness of social and private income transfers has increased during the same period. The increasing rate of poverty reduction effectiveness of social income transfers was greater than that of private income transfers, indicating relatively rapid expansion of social income transfers. However, the poverty reduction effectiveness of private income transfers was still larger than that of social income transfers. These results imply that on the one hand, private welfare has played a more important role than private welfare in poverty reduction in Korea. On the other hand, the role of public welfare has expanded since the 1997 Asian Economic Crisis.

In addition, the non-working poor showed relatively higher poverty reduction effectiveness of income transfers than the working poor, indicating that both social and private income transfers have been concentrated on the non-working poor. However, the difference in the poverty reduction effectiveness of income transfers between the non-working poor and the working poor has decreased over time. These results imply that the benefits of income transfers have expanded to the working poor.

Comparison of the poverty reduction effectiveness between the pre- and post-NBLSA periods revealed the distinct effect sizes of income transfers between these two periods. While there was a significant increase in poverty reduction effectiveness of social income transfers

at the post-NBLSA period, no significant difference between the pre- and post-NBLSA periods was found in private income transfers. These results suggest that social income transfers under the NBLSA have a larger effect on poverty reduction than such transfers did under the Public Assistance Program (PAP). Furthermore, the results also showed that the effect size of social income transfers on poverty gap reduction among the working poor outstrips that of private income transfers after the introduction of the NBLSA. This result implies that for the working poor, social income transfers have played a more important role than private income transfers in poverty gap reduction after the introduction of the NBLSA.

CONCLUSION

This study comprehensively analyzed the poverty reduction effect of income transfers according to two criteria, poverty rate and poverty gap. All of the empirical evidence indicates that income transfers have helped one in five poor households escape from poverty between 1997 and 2005. During the same period, income transfers also significantly alleviated the depth of poverty, reducing 25 percent of the poverty gap among the poor households in Korea.

Moreover, recent reforms in the social welfare system, represented by National Basic Livelihood Act (NBLSA), have dramatically changed the nature of the Korean antipoverty effort. The empirical evidence indicates that the NBLSA has significantly improved the poverty reduction effect of social income transfers especially for the working poor. This means that the NBLSA has extended the scope of social income transfers to working poor who were uncovered by the old social income transfers under the Public Assistance Program (PAP). As such, it seems that the NBLSA has succeeded in accomplishing its intended goal, which was to expand the coverage of social welfare to the working poor.

However, looking at social income transfers and private income transfers separately, the effect size of private income transfers on poverty reduction is one and half times larger than that of social income transfers. Of course, social income transfers have more rapidly increased than have private transfers after the introduction of the NBLSA. Still, the poverty reduction function of Korean society is dominated by the pri-

vate welfare sector, such as the extended family and personal networks, rather than the public welfare sector.

RECOMMENDATIONS

The following recommendations are proposed. First, Korean government should increase the absolute size of social income transfers to more effectively reduce poverty in Korea. Second, additional supports for the working poor population are needed in order to improve the economic security.

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