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**Research Report**

## Changes in the Relative Importance of the Minimum Wage, Income Support and Employment Support Programs

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## KDI FOCUS

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## Changes in the Relative Importance of the Minimum Wage, Income Support and Employment Support Programs

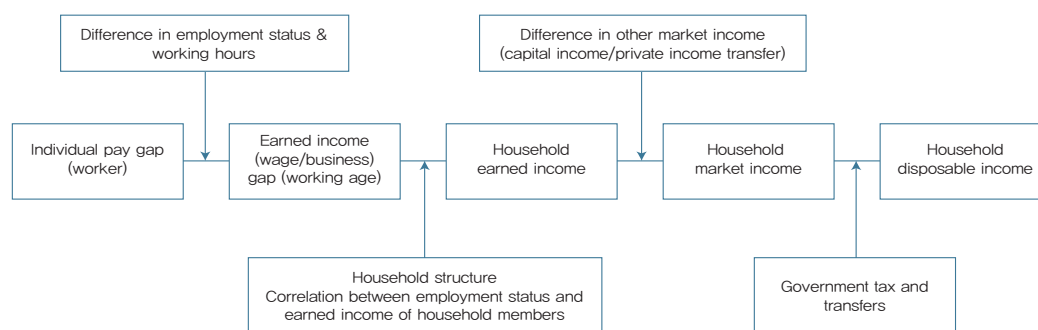
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**“Because there is a significant mismatch between low wage and low income, policies tackling the poverty issue must focus on low income households rather than low-wage workers and emphasize the EITC or labor market policies that support low income households rather than the role of the minimum wage system that supports low-wage workers.”**

Rising by 7.3% from a year ago, the minimum wage for 2017 was fixed and announced at 6,470 won. Nonetheless, doubts over the effectiveness of the minimum wage program—noncompliance of the minimum wage requirement marked 6.2-11.5% in 2015—and the ambiguous division of roles among various support programs have continued to raise concerns regarding what the effective means of tackling poverty are in an ever-changing socioeconomic environment.

Fundamentally, the relationship between wage and household income has become increasingly complicated as more women join the workforce and more part-time jobs become available; in the past, there was generally one full-time wage earner per household, meaning that increased wages translated directly into increased household income. Moreover, a considerably high proportion of low-paid workers are from middle-

[Figure 1] Contributing Factors to Pay Gap led Household Income Gap and the Course



Source: Made by author using OECD (2011).

and high-income households, while the most vulnerable remain unemployed. Accordingly, it is essential that the efficacy of the existing wage policy is reexamined and efforts are made to seek the appropriate antipoverty methods in response to changing conditions.

In order to identify the effective policy tools for income support, this paper tracks how an individual's wage can lead to poverty for a household. Based on this, it is particularly important to adopt a balanced approach when considering anti-poverty measures such as cash transfers, increasing employment and enhancing employment capabilities.

## I. Classifications of Low Wage and Poverty

Household income is determined by the number of employed members, wage, market income other than earned income, and government transfers. The presence of an employed member is critical to the conditions of falling into poverty.

Between wage level and poverty lie several different stages and concepts. Firstly, poverty is a level of household income and household income can be broadly divided into earned income and unearned income. Of the three elements that determine the difference of earned income: the number of income earners per household; the number of working hours per income earner; and the pay gap, the first element is the most closely related to income gap and poverty (Kenworthy, 2008).

Besides earned income, market income and government tax and transfers are other key components of household income while changes in demographic structure and household composition directly affect the number of income earners per household, which consequently impact income distribution.

## II. Mismatch between Low Wage and Poverty

The ratio of low-wage workers in the bottom percentiles can be estimated using nationwide data on wage and household income, amongst others. <Table 1> shows the household income strata of low-wage workers—those who earn less than two thirds of

&lt;Table 1&gt; Distribution of Low-wage Workers by Income Decile (2013)

(Unit: 10,000 persons, %)

		Household income decile												
		Total	Bottom 20%									Top 20%		
			Sub	1	2	3	4	5	6	7	8	9	10	Sub
Total low-wage workers	Size	420	91	35	56	66	61	43	37	31	42	28	17	45
	Prop.	100.0	21.7	8.4	13.3	15.8	14.5	10.3	8.9	7.4	10.0	6.6	4.0	10.7
Full-time low-wage workers	Size	363	65	21	44	56	56	34	31	35	41	28	14	42
	Prop.	100.0	17.9	5.8	12.1	15.4	15.4	9.4	8.6	9.6	11.4	7.7	3.8	11.5

Note: 1) Household income decile based on equalized household disposable income.

2) In this table, low-wage workers among total wage workers are those who earn less than two thirds (6,853 won) of the median wage (10,280 won) per hour, while low-wage workers among full-time wage workers are those who earn less than two thirds (7,077 won) of the median wage (10,615 won) per hour.

Source: 17<sup>th</sup> Korean Labor and Income Panel Study (2014 release; 2013 income basis), accessed on 30<sup>th</sup> Jun. 2016.

&lt;Table 2&gt; Proportion of Households in the Lower Income Decile without an Employed Member (2006, 2015)

(Unit: %)

	2006			2015		
	Total (1-10)	Decile 1	Decile 2	Total (1-10)	Decile 1	Decile 2
Total households	16.5	70.9	37.9	18.1	77.4	42.9

Note: Household income decile based on equalized household disposable income.

Source: Household Income and Expenditure Survey for 2006 (MDSS) and 2015 (MDIS), Statistics Korea, accessed on 2<sup>nd</sup> Aug. 2016.

the median wage according to the Korean Labor and Income Panel Study.

21.7% of low-wage workers belong in the bottom 20% percentile of low income households. In other words, 78.3% of low-wage workers belong to households in the 3rd income decile and above (Table 1).<sup>1)</sup>

Only 21.7% of low-wage workers are poor.

The significant mismatch in the lower deciles between wage and income distribution is the outcome of sustained structural changes brought on by servitization and weakening of the traditional household structure wherein the sole earner is a male member. Another key factor is that Korea's rapid population aging has served to accelerate the proportion of households without an employed member. <Table 2> shows that the proportion of households in the 1 and 2 deciles without an employed member has increased by 6.5%p and 5.0%p, respectively, during the past nine years when annual data on national household income distribution have been available.

<Table 3> shows the income composition of when workers earning less than the minimum wage—who represent low-wage workers—do not belong to the poverty group; concrete example of the mismatch between low wage and low income.

Based on the income per hour calculated using only the average monthly income and

1) In Europe, the majority of low wage workers are from households with two income earners, most of which are located at a relatively higher position in the household income distribution. The proportion of households who have low-wage member(s) but are not poor is 9-19%, much higher than that of poor households who have low-wage workers (1-3%) (Salverda, 2012).

&lt;Table 3&gt; Income Composition of Below-minimum Wage Workers Relative to the Poverty Line (2013)

(Unit: 10,000 persons, %)

Below-minimum wage workers	Household income decile					
	Total	Bottom 20%	Bottom-to-Median 20%	Median 20%	Median-to-Top 20%	Top 20%
Total (1,000 persons)	100 (1,523)	100 (476)	100 (420)	100 (258)	100 (241)	100 (125)
Poverty group	30.5	97.0	0.6	0.0	0.0	0.0
Earned income of below-minimum wage workers above the poverty line	9.7	0.0	14.3	13.1	10.2	23.7
Earned income of workers below the poverty line but household earned income above the poverty line	47.9	3.0	48.2	80.0	86.8	75.2
Earned income of workers below the poverty line but disposable household income above the poverty line	11.9	0.0	36.9	6.9	2.9	1.0

Note: 1) Minimum wage (4,860 won) as of 2013. The scope of inclusion is not considered in this table, and the proportion of below-minimum wage workers is estimated by calculating the wage per hour using the 'average monthly income' and 'monthly working hours' presented in individual data in the Korean Labor and Income Panel Study.

2) Household income decile based on equalized household disposable income. The poverty line in this table is 11,165,000 won based on the equalized and individualized household disposable income.

Source: 17<sup>th</sup> Korean Labor and Income Panel Study (2014 release; 2013 income basis), accessed on 30<sup>th</sup> Jun. 2016.

30.5% of the below-minimum wage workers are poor, and 69% of the below-minimum non-poor workers were found to live above the poverty line due to other household members' earned income.

working hours, a roughly estimated 30.5% of workers paid below the minimum wage were found to belong to the poor group.<sup>2)</sup> Among below-minimum wage workers, only 9.7% was found to live above the poverty line on their own earned income<sup>3)</sup> while 47.9% achieved this on the combined income of other household members.

As the results show, as much as the presence of another employed household member significantly affects the poverty status of a below-minimum wage worker, the main determinant of an individual's income leading the household to poverty is the employment distribution of each income class. According to <Table 4>, only 2.8% of households with employed members are currently in income decile 1, and of the households in this decile, only 22.6% have employed members. On the other hand, the proportion of households with two or more employed members is higher in high income households. Specifically, only 0.3% belong to decile 1 while 16.7% belong to decile 10 (Table 4).

### III. Social Safety Net Coverage

If the poverty rate is mainly determined by individual wage gaps, unearned income and the presence of households without employed members (seniors and labor market dropouts), social safety nets—policy tools aimed at reducing poverty—must be designed

2) The Minimum Wage Act does not regard some payments, including bonus, as wage. Such exclusions have been disputed heatedly as an 'inclusion scope' issue, since the actual minimum wage is found to be higher than the legally required minimum due to the exclusion. However, they are ignored in this paper for the sake of simplicity.

3) The poverty line here is a relative concept which is defined at 50% of the median income.

&lt;Table 4&gt; Household Distribution by the Number of Employed Members in Each Income Decile (2015)

(Unit: %)

Household type		Household income decile										
		Total	1	2	3	4	5	6	7	8	9	10
Total		100 (100)	100 (10.0)	100 (10.0)	100 (10.0)	100 (10.0)	100 (10.0)	100 (10.0)	100 (10.0)	100 (10.0)	100 (10.0)	100 (10.0)
Employed member	None	18.1 (100)	77.4 (42.7)	42.9 (23.7)	20.6 (11.4)	11.3 (6.2)	8.4 (4.6)	6.1 (3.4)	4.4 (2.4)	3.2 (1.7)	3.7 (2.0)	3.4 (1.9)
	Yes	81.9 (100)	22.6 (2.8)	57.1 (7.0)	79.4 (9.7)	88.7 (10.8)	91.6 (11.2)	93.9 (11.5)	95.6 (11.7)	96.8 (11.8)	96.3 (11.8)	96.6 (11.8)
	1	44.8 (100)	21.3 (4.8)	48.6 (10.9)	59.9 (13.4)	61.9 (13.8)	55.0 (12.3)	47.2 (10.5)	41.7 (9.3)	42.9 (9.6)	34.6 (7.7)	34.7 (7.8)
	2	37.1 (100)	1.2 (0.3)	8.6 (2.3)	19.5 (5.2)	26.9 (7.3)	36.6 (9.9)	46.6 (12.6)	53.9 (14.5)	53.9 (14.6)	61.7 (16.6)	62.0 (16.7)

Note: 1) Household income decile based on equalized household disposable income

2) Figures in ( ) denote the percentage of households by income decile by the number of employed members

Source: Household Income and Expenditure Survey for 2015 (MDIS), Statistics Korea, accessed on 2<sup>nd</sup> Aug. 2016.

in a way that could appropriately respond. Ongoing policies include employment-linked income support through the EITC, job skill development programs and job matching services through employment support (active labor market policy) and income guarantee for those living in extreme poverty and on minimum wages.

Finding the optimal combination for the above policy means is just as important and to do so, this paper ran a simulation to see how much additional income would be needed for a minimum wage worker to escape poverty. The results are presented in <Table 5>.

A four-member household—a couple with two children—would need an additional monthly income of 675,000 won to escape poverty when only one member is employed with a minimum wage. This implies that a 53.6% increase in the minimum wage would be needed for the household to earn the extra income. However, not only could such a significant increase have an adverse effect on employment and wages in general, but estimating the impact on income distribution would be uncertain as the level of minimum wage workers' household income varies.

Therefore, the EITC may be effective in reducing poverty as it supports individual income based on the household income level. It is also connected to economic activities so that motivations to work are not hindered. In this case, however, a massive 8,100,000 won per year is needed for income support from tax and transfers, according to <Table 5>.

On the contrary, in cases where there are additional income earners in the household who work 15 hours a week, the additional income required to escape poverty will be 175,000 won per month or 2,100,000 won per year. This is the maximum allowance paid by the current EITC. Considering that as much as 11.5% of total workers are paid below the minimum wage, even a dual income couple should be given more benefits from the EITC in order to stay afloat above the poverty line; this would be affordable by expanding the coverage of the existing system.

&lt;Table 5&gt; Required Income to Escape Poverty by Type of Minimum Wage Income Earner (2016)

Household with income earners	Per hour wage necessary to escape poverty	Household type (number of household members)				
		1-person	2-person	3-person	4-person	5-person
1 full-time minimum wage worker	Additional household income required (10,000 won)	-	10.8	41.6	67.5	90.3
	Required minimum wage (won)	4,630	6,548	8,019	9,260	10,353
	Required wage increase (%)	-	8.6	33.0	53.6	71.7
1 full-time minimum wage worker + 1 part-time worker (15 hours)	Required additional household income (10,000 won)		-	-	17.5	40.3

Note: 1) Poverty line is at 967,652 won, 50% of the median disposable income (KOSIS), 1,935,304 won, as of 2015.

2) This table assumes that the minimum wage worker is paid 1,260,270 won for 209 hours per month, while the part-time worker is paid 500,490 won for 83 hours per month (3 hours per day for 5 days a week, 4 hours of paid weekly rest included). Wage per hour is set as 6,030 won, the minimum wage for 2016.

Source: KOSIS, Statistics Korea, accessed on 12<sup>th</sup> Jul. 2016.

&lt;Table 6&gt; Demographic Traits of Able-bodied Unemployed Persons by Income Decile (2013)

(Unit: %)

		Total	Household income decile		
			Bottom 20%	Median 20%	Top 20%
Total (10,000 persons)		100(1,280)	100(265)	100(259)	100(242)
Gender	Male	32.7	35.9	28.7	28.1
	Female	67.3	64.1	71.3	71.9
Education	Middle school graduate or lower	35.0	70.9	24.9	11.2
	High school graduate	26.9	16.9	29.6	28.4
	Undergraduate or higher	38.1	12.1	45.5	60.4
Age	18~29	27.2	6.9	31.1	43.0
	30~49	22.9	11.0	34.1	22.0
	50~64	20.8	21.2	16.2	24.0
	65~74	17.4	31.0	12.5	8.6
	75+	11.7	30.0	6.1	2.4

Note: 1) Household income decile based on equalized household disposable income

2) This table defines able-bodied people as those who answered ① able to work, or ② able to carry out simple work when asked about the degree of their working ability.

Source: 9<sup>th</sup> Korea Welfare Panel Study (as of 2013), accessed on 1<sup>st</sup> Apr. 2015.

However, as shown in this paper, the presence and the number of employed persons affect the conditions of falling into poverty, and therefore greater emphasis should be placed on labor market policies that support job skill development and employment.<sup>4)</sup>

<Table 6> shows that a high proportion of the unemployed in the low income bracket

4) An increase in the employment rate will not necessarily increase the number of employed persons in poor households and improve the income distribution. When a high income household has an additional high-paid member, this will exacerbate the income inequality (Cantillon, 2011). According to the recent study by Yun (2015) which analyzes the conditional changes in economic activities using a multinomial logit model, income classes have not brought on meaningful impact to the recently created new employment. This implies that to make use of the increased employment rate in anti-poverty policies, additional policy consideration should be given to income classes.

In order for a four-member household with a single minimum-wage worker not to fall into poverty, the wage needs to be raised by 53.6% while the addition of an extra income earner working three hours a day could help them stave off poverty if the EITC coverage expands slightly.

Unemployed members in the low income class are mostly seniors and the less educated. The higher income the household has, the lower the age of its unemployed member and higher its education level is.

**<Table 7> Participation in the Past Three Years from Poor Individuals by Working Ability and Employment (2011-2013)**

(Unit: 10,000 households, %)

Category	Poor individuals	Able-bodied persons		
	No. (%)	No. (%)	Employed No. (%)	Unemployed No. (%)
Total aged 18 and over	719	572	235	337
Employment support programs	59 (8.2)	54 (9.4)	35 (14.7)	19 (5.6)
Vocational training programs for the unemployed	5 (0.7)	5 (0.8)	3 (1.4)	1 (0.4)
Job skill development programs	2 (0.2)	2 (0.3)	1 (0.4)	1 (0.2)
Total aged 65 and over	399	285	92	193
Senior job placement project	29 (7.4)	25 (8.8)	15 (16.4)	10 (5.1)

Note: This table defines able-bodied people as those who answered ① able to work, or ② able to carry out simple work when asked about the degree of their working ability.

Source: 7<sup>th</sup>-9<sup>th</sup> Korea Welfare Panel Study (2011-2013), accessed on 1<sup>st</sup> April 2015.

**<Table 8> Participation in the Past Three Years from Members of Poor Households by Working ability and Employment (2013)**

(Unit: 10,000 households, %)

Category	Total households	Households with able-bodied members			Households without able-bodied members
		Subtotal	Households with employed member	Households without employed member	Subtotal
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Total	466	387	185	202	79
Recipients of National Basic Livelihood Security benefits	109 (23.4)	84 (21.7)	20 (10.7)	64 (31.9)	25 (31.5)
Recipients of livelihood benefits	335 (71.8)	264 (68.2)	103 (55.4)	161 (79.9)	70 (89.1)

Note: This table defines able-bodied people as those who answered ① able to work, or ② able to carry out simple work when asked about the degree of their working ability.

Source: 7<sup>th</sup>-9<sup>th</sup> Korea Welfare Panel Study (2011-2013), accessed on 1<sup>st</sup> April 2015.

is comprised of the less educated, seniors and women, meaning that customized employment support programs targeting these groups would directly contribute to reducing poverty and improving income distribution.

A closer look into how well these policies reach the poor helps to roughly measure the density of major social safety nets targeting them. Their participation rate over the past three years shows only a small number of key policy targets—‘able-bodied persons in the low income brackets’—is found to have benefited from policies aimed at increasing employment (9.4% attended employment support programs, less than 0.8% attended vocational training programs), while 68.2% were recipients of cash benefits. This implies that compared to income support for poor households, employment support is considerably lacking.

**Among the able-bodied poor, only 9.4% participated in employment support programs, while 68.2% benefited from income support.**



## IV . Implications on Poverty-targeted Policies

Concrete targets are important when designing a combination for the minimum wage program and EITC for income security, for example ‘to secure the income of households with 1.5 income earners with two children to help them stay above the poverty line.’

Anti-poverty policy for households with the ability to work should focus on enhancing their economic activities.

The low possibility that a minimum wage worker would fall into poverty implies that the current minimum wage program may be too ineffectual as a policy measure for poverty reduction. A more effective means would be to designate, with the EITC, beneficiaries based on household income and to provide benefits in connection with economic activities so that the motivation to work is not blunted.

In the short run, these two measures need to be reasonably integrated and implemented according to a concrete set of targets to ensure income guarantee, for example “to not allow children in households with 1.5 workers to live in poverty.” It should be noted, however, that the most active and fundamental anti-poverty measures are those labor market policies that encourage and support the unemployed to enter the labor market.

In essence, considering that the presence and number of employed persons and the distribution of working hours are critical in avoiding poverty, at the very least, anti-poverty policies targeting households with able-bodied workers should be managed with more focus placed labor market policies.

To extract specific policy implications, the minimum wage program should be reconsidered to reset the policy goals, taking into full consideration the large mismatch between the program and targeted households in the low income brackets. Above all, it is necessary to design a role sharing system with the EITC—supporting the working poor based on household income—and to establish concrete targets for income guarantees. Next, although policies to increase employment have broad policy targets to include productivity enhancement and improve women’s labor force participation, the design and considerations should be more active and aggressive to help those living in poverty.

Lastly, a general shift in the focus of social policies is needed. As the coverage and density of social safety nets are still low, it is imperative to expand and supplement them. However, what is most important in this process is to set the policy direction towards correcting the current situation of markedly low coverage of labor market-oriented support compared to the coverage of direct income support from the long-term perspective. ■

## References

- Cantillon, Bea, "The Paradox of the Social Investment State: Growth, Employment and Poverty in the Lisbon Era," *Journal of European Social Policy*, Vol. 23, No. 5, 2011, pp.432~449.
- Kenworthy, Lane, "Sources of Equality and Inequality: Wages, Jobs, Households, and Redistribution," in Lane Kenworthy (ed.), *Jobs with Equality*, Chapter 3, Oxford University Press, February 2008.
- OECD, *Divided We Stand: Why Inequality Keeps Rising*, OECD Publishing, 2011.
- Salverda, Wiemer, "Labour-market Activity and the Household-income Distribution in European Countries," *International Labor Brief*, Vol. 10, No.5, Korea Labor Institute, 2012, pp.3~23 (in Korean).
- Yun, Heesuk, *Increasing Gap between Low Pay and Household Poverty and Its Implications on Anti-poverty Policy*, Policy Study, 2015-12, Korea Development Institute, 2015 (in Korean).

### <Source>

- Korean Labor and Income Panel Study (<https://www.kli.re.kr>, last accessed: Jun. 30<sup>th</sup> 2016).
- Korea Welfare Panel Study ([www.koweps.re.kr](http://www.koweps.re.kr), last accessed: Apr. 1<sup>st</sup> 2016).
- KOSIS ([www.kosis.kr](http://www.kosis.kr), last accessed: Jul. 12<sup>th</sup> 2016).
- Statistics Korea, *Household Income and Expenditure Survey for 2006* (MDSS) (<http://kostat.go.kr>, last accessed: Aug. 2<sup>nd</sup> 2016).
- Statistics Korea, *Household Income and Expenditure Survey for 2015* (MDIS) (<http://kostat.go.kr>, last accessed: Aug. 2<sup>nd</sup> 2016).