The Effects of the Minimum Wage on Poverty in Korea*

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Abstracts

The effects of the minimum wage policy have been controversial in Korea with an increasing gap between the rich and the poor since the Asian financial crisis. Most studies in Korea have focused on the disemployment effects of higher minimum wages and the negative effects of the policy in Korea. This study looks at the possible effects of the minimum wage policy on reducing poverty rates, as measured by the number of people who fall under the defined poverty threshold. We utilize a binary probit model to analyze the Korean Labor and Income Panel Study data and find that a higher hourly minimum wage can reduce the probability of an individual falling under the poverty line.

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Ⅰ. Introduction

As is reviewed by Kennan (1995), the effects of minimum wages are multilateral and elusive. Most previous empirical studies on the

minimum wage policy have focused on its negative effects such as the reduction of employment opportunities for young adults or the reduction of employment benefits and cost of training workers. In fact, in the United States, it has been shown that high school dropout rates have increased as a result of a minimum wage hike.[1] These studies have continued since the 1980s and more recent studies utilizing panel data have corroborated such previous results.

In 2011, the Minimum wage Council of Korea raised the minimum wage by 5.1 percent to 4,320 won (about $3.9) per hour. Past studies indicate that raising minimum wages may in fact result in employers reducing their labor force, either downgrading minimum wage earners to the informal sector or just forcing them to unemployment.

There have been many studies on the disemployment effects of raising the minimum wage level in Korea. However, not much evidence is shown to prove the poverty alleviating effects of the policy. With a rising "working poor" class, there are greater implications for policies like the minimum wage law. Immediately after the 1997 Asian financial crisis, Korea's poor class expanded to include many irregular workers and those in private businesses. Therefore we attempt to analyze the effects of the minimum wage policy on poverty in Korea and focus on whether it can reduce the probability of an individual lying under the poverty line.

Ⅱ. Survey of the Literature

The effects of minimum wage policies have been primarily explained by economic theories based on the Harris-Todaro model. A minimum wage hike in the formal sector will reduce the labor force and push the unskilled laborers into the informal market. With a

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1) Anderson and Rawe (2009).

larger labor supply in the informal market, wages will fall. On the other hand, since expected wages in the formal sector are higher, workers laid off by the raise in the minimum wage have an incentive to stay in the formal sector and search for a different job. It also provides workers in the informal sector with incentives to enter the formal sector. As a result, unemployment in the formal sector may rise. Therefore, the overall impact of a minimum wage increase is ambiguous. According to Addison and Blackburn (1999), "while some workers gain, others lose, with the benefits of the minimum wage not being spread out evenly across low-income workers."

The effects of the minimum wage on the distribution of family incomes are also uncertain for similar reasons that a minimum wage hike produces both losers and gainers. In fact, the problem becomes more complicated when we want to analyze the effects of raising the minimum wage on family income distribution as opposed to earnings because other unpredictable factors come into play, as Addison and Blackburn (1999) suggest. For example, with a rise or fall in family earnings due to the effects of the wage hike, other members of the family not affected by the minimum wage may choose to change their work status, by either leaving their jobs or finding one, depending on whether the member was previously working or not working, respectively.

In the United States, dozens of simulation studies have been done in the 1990's on the effects of this policy, both including and disregarding disemployment effects. Most of them have suggested that minimum wages do reduce poverty. One of the first actual empirical studies done on this topic was by Card and Krueger (1995). They did regression analyses with state level data and concluded that there is "a modest poverty-reducing effect of the minimum wage" (Card and Krueger). They also claimed that if the demand for labor in the formal sector is inelastic, wages in both sectors will actually

rise. Addison and Blackburn (1999) particularly focused their analysis on three groups of workers most likely to be low-wage workers: teenagers (age 16 to 19), young adults (age 20 to 24) and junior-high dropouts. They found that a 25 percent increase in the minimum wage lowers the poverty rate of workers in the three groups by 9%.

Despite the positive implications of early studies, there remained a lot of skepticism with regards to the poverty alleviating effects of higher minimum wages. For instance, in most developed countries, minimum wage earners are teenagers, as is the dominant case in the United States. It has been shown that they tend to be children of high-income families and not members of poor households. As a result, raising the minimum wage only increases total income of high-income households and does little to redistribute income across households. In addition, it is difficult to enforce minimum wage laws in the informal sector. However, in developing countries, most of the lowest-income workers tend to either work in the unregulated and informal sectors or engage in private family business, and in effect receiving none of the benefits of a higher minimum wage.

Neumark and Wascher (2002) did a more rigorous empirical study that captured both the disemployment effect and the income effect of the minimum wage hike. They showed that over a one-to-two-year period, raising the minimum wage increases the probability of poor families escaping poverty. However, the study also showed that the probability of non-poor families falling into poverty increases as families that were initially not poor began to receive lesser wages. Nevertheless, they found that the incomes of families that remain below the poverty line do rise from raising the minimum wage level.

Additionally, other studies look at the different effects the minimum wage has on developed and developing countries. The "World Development Report" of 1995 provides evidence that the minimum wage policy is ineffective in low-income countries because

both employers and employees are likely to either ignore or be unaware of the minimum wage law. However, studies on South America in recent years including Lustig and McLeod (1996) showed that in certain areas of South America and Asia, higher minimum wages have a significant negative correlation with poverty rates; an increase or decrease in the minimum wage reduces or increases the poverty rate, respectively. Although minimum wage policies could reduce efficiency and competitiveness especially in low income countries, and as Lustig and McLeod (1996) have shown, raise unemployment by increasing the minimum wage, the overall conclusion is that in the short run, higher minimum wages do help the poor. Morely (1995) and Gindling and Terrell (2008) have also made similar conclusions through data analysis. These results contrast with earlier studies in developed countries such as the United States that proved that wage hikes have been ineffective in protecting the poor class.

In Korea, studies reflecting on the effectiveness of the minimum wage have only begun to emerge recently, with most of them focusing on the disemployment effects. One of the first empirical studies done by Kim and Kim (2004) analyzes data from 1988-2004 and concludes that raising the minimum wage in Korea has had a positive effect for the following groups of people: age 24-54, age 54 years and older, and women. Similar results have been shown with different data. Lee et al. (2008) use panel data analysis to show that the minimum wage has a negative employment effect for teenagers and old-age workers while it has a positive effect on prime-age workers (age 25-54).

There are very few studies that address the poverty-alleviating effects of the minimum wage in Korea. Most of them are simple data analysis or simulation analysis and they conclude that the poverty-reduction effects are modest because the level of the minimum wage

is too low to affect low-income workers, and there are still too many low-paying jobs that ignore the minimum wage law. However, Lee (2009) shows that with a higher level of the minimum wage and eligible-recipients-to-total-worker ratio, and a smaller disemployment effect, poverty rates can be lowered.

Ⅲ. Minimum Wages and Poverty in Korea

The issue of rising poverty rates began to surface in Korea after the Asian financial crisis in 1997 when major structural reforms were implemented. People were laid off in massive scales after which more than 57 percent of laborers became 'non-regular' or low income workers.[2] With the unexpected rise in the low income workers, the government began to reinstate and enforce a more effective minimum wage policy.

Although Korea passed the minimum wage law in 1986, it went into effect in 1988. In the beginning, the law applied only to workers in designated industries of certain sizes. In 2001, the law was expanded to include all workers in all industries. Figure 1 shows the growth rate of minimum wages in comparison to the growth rate of the nominal GDP from 1989 to 2010. Although the growth rate of the minimum wage in 1989 was 29.7%, it gradually decreased through the 1990's, reaching 2.7% in 1999. In fact, there are many years in which the rate of minimum wage increase falls short of the GDP growth rate. Additionally, even though the growth rate of the minimum wage has been rising in the 2000's, the highest rate spikes were in 2001 and 2005 of 16.6% and 13.1% respectively.

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2) 'Non-regular' workers refer to the workers on a short-term contract (usually yearly contract), while 'regular' workers are on a longer-term or permanent contract. Although non-regular workers are full-time workers, their job security is much more vulnerable than regular workers.

【Figure 1】 Growth Rate of Minimum Wages and GDP (%), 1989-2010

Korea's minimum wage falls short of the minimum cost of living that is calculated and readjusted every year by the Ministry of Health and Welfare. The index was first introduced in 1999 in order to serve as the basis for social welfare policies and subsidies and has been released every year in August. In Korea, a national survey of the living standard of the general public is taken every three years and the index is calculated on a market basket basis. Approximately 20,000 households in 481 regions are included and the index is produced by the price levels of goods included in the "basket" that are considered the absolute necessities of livelihood and they are weighted by the degree of use. In the two years in which the survey is not taken, the index is estimated through the increase rate of the consumer price index.

The minimum living expenses are categorized into six different levels, each representing the bare minimum needed per household with one to six members. We present, in Figure 2, only four of the six levels as compared with the minimum wage that is converted into a monthly figure. Although the monthly minimum wage is higher than the minimum living expenses for a household of 1

person, it falls short of the amount that is needed for households of 2 or more people.

【Figure 2】 Monthly Minimum Wage and Minimum Living Expenses
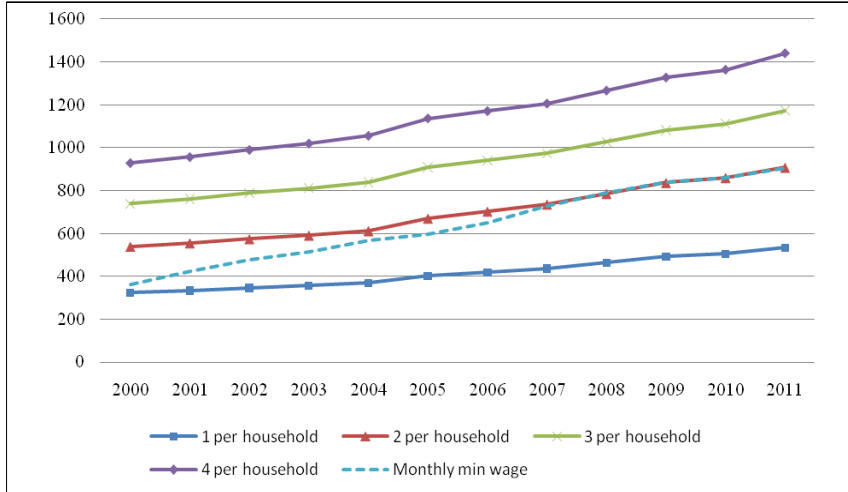
Note: 1,000 Korean Won, 2000-2011.

Ⅳ. Methodology and Data

We use the Korean Labor & Income Panel Study (KLIPS) that is annually released by the Korea Labor Institute (KLI). It is an overall survey of the labor market and the income situation of 5,000 households and individuals in Korea. It is the first domestic panel study on the labor market and the only longitudinal survey conducted on the national level. Data have been released since 1998 with11years' worth of data up to 2009. However, because data for annual income is not consistent across the board, we have decided to analyze only data from year 6 (2003) to year 11 (2008).

Our objective is to analyze the effects of the minimum wage policy on "the poor", as is defined by the official minimum cost of living, and to estimate the effects of a minimum wage increase on the

probability that an individual will be able to escape from poverty. We employ the following panel probit regression:[3]

$$Poor_{it} = \alpha_0 + \alpha_1 \ln(MW)_t + \beta' X_{it} + \gamma W_t + e_i + u_{it} \qquad (1)$$

The variable $Poor_{it}$ indicates whether individual i at time t is poor or not. It takes on a value of 1 if the individual's annual income is less than the minimum cost of living, considered to be "poor", and a value of 0 otherwise. MW_t is the official hourly minimum wage that is annually announced by the Minimum Wage Council.

Although there is no official poverty line in Korea, "absolute poverty" is usually referred to those living under the level of the minimum cost of living made official by the government every year. In our study, we categorize those earning less than the minimum cost of living for a household of 1,2,3, and 4 as poor ($Poor_{it} = 1$) and those that earn above as non-poor ($Poor_{it} = 0$) for each year.

X_{it} contains a set of individual specific variables including age, age squared, years of schooling, years of schooling squared, and weekly working hours, in addition to dummy variables that specify location of residence, sex, health condition. Additionally, W_t is a macro-level covariate, e.g., growth rate of real GDP included to control for the economic climate. We use an individual random effects probit model to estimate the probability of being poor with respect to the change in minimum wages.

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3) The model is similar to the one used by Gindling and Terrell (2008).

【Table 1】 Descriptive Statistics of Variables

	Description	Mean (All Surveyed)	Mean (Workers Only)
Age		44.99 (0.0856)	41.12 (0.1225)
Age-squared		2153.63 (8.2028)	1788.77 (10.7534)
Sex	1-Male, 0-Female	0.71 (0.0034)	0.71 (0.0056)
Education	Years of schooling	11.95 (0.0277)	12.53 (0.0406)
Education-squared		156.37 (0.6240)	167.67 (0.9579)
Location[4]	1-Urban, 0-Non urban	0.52 (0.0038)	0.56 (0.0062)
Weekly Working Hours		49.10 (0.1342)	48.64 (0.1551)
Working	1-Currently working, 0-Otherwise	0.97 (0.0012)	–
Health Condition	1-Excellent/Good, 0-Poor	0.61 (0.0037)	0.67 (0.0058)
ln (Minimum wage)	Log of real minimum wage	7.92 (0.0010)	7.92 (0.0010)
GDP growth	Growth rate of real GDP (%)	4.2 (0.0081)	4.2 (0.0081)
Full-time	1-Full time, 0-Part time	–	0.97 (0.0019)
Regular work	1-Regular, 0-Irregular job	–	0.82 (0.0047)
Work status	1-Consistently working, 0-Temporary job/Daily worker	–	0.89 (0.0039)
Job type	1-Private company, 0-Public/Government related	–	0.89 (0.0039)
Size of workplace[5]	1-Large and Mid-sized firm, 0-Small business	–	0.55 (0.0062)
P1	1-Poor, 0-Non poor	0.05 (0.0016)	0.01 (0.0015)
P2	1-Poor, 0-Non poor	0.13 (0.0025)	0.07 (0.0031)
P3	1-Poor, 0-Non poor	0.21 (0.0031)	0.15 (0.0044)
P4	1-Poor, 0-Non poor	0.31 (0.0035)	0.24 (0.0053)

Note: Standard errors are in parentheses.

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4) Urban includes the seven major cities of Korea: Seoul, Busan, Daegu, Daejeon, Incheon, Gwangju, and Ulsan. All other areas were classified as non urban.
5) Companies with 50 or fewer employees are considered small businesses. This simplified classification is based on that as defined by the Minor Enterprise Basic Law of Korea.

Table 1 shows the sample means and standard deviations of the variables for the entire sample and for the workers sample. We find that in our analysis, the average age is 45, there are more men in the sample, the average number of years of schooling is 12, and the proportion of urban-to-rural dwellers is nearly equal. Also, most of the population is currently working with an average weekly working hour of 49. The average age of the 'workers only' sample is slightly lower at 41 and the weekly working hours are slightly less. Most workers are full-time, regular workers, while the ratio of large-to-small firm workers is approximately 1:1.

【Table 1-1】 Descriptive statistics by year

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Age	42.49	43.49	44.49	45.49	46.48	47.49
Age-squared	1932.22	2018.2	2106.22	2195.88	2287.43	2381.47
Sex	0.71	0.71	0.71	0.71	0.71	0.71
Education	11.992	11.97	11.98	12.01	11.90	11.92
Education-squared	156.20	156.10	156.71	157.50	155.50	156.20
Location	0.52	0.52	0.52	0.52	0.52	0.51
Weekly Working Hours	51.02	50.95	49.07	48.75	48.52	46.29
Working	0.98	0.98	0.98	0.98	0.98	0.94
Health Condition	0.61	0.59	0.58	0.61	0.62	0.62
ln (real MW)	7.73	7.79	7.89	7.95	8.05	8.09
GDP growth	2.9	4.9	3.9	5.2	5.5	2.8
P1	0.0560	0.0462	0.0533	0.0513	0.0451	0.0519
P2	0.1215	0.1212	0.1222	0.1300	0.1273	0.1310
P3	0.2074	0.2155	0.2135	0.2077	0.1952	0.2430
P4	0.3112	0.3248	0.3174	0.3007	0.2936	0.2994

Ⅴ. Empirical Results

Our first analysis included data of 2,946 individuals over the six year period between 2003 and 2008. Table 2 summarizes the results

of our analysis for the effects of a rise in the minimum wage under different poverty thresholds: P1, P2, P3, and P4. Each defines the poverty threshold by the monthly minimum cost of living for families of one, two, three, and four members, respectively, in a given year.

The estimated coefficients of $\ln(MW)$, which is the variable of interest, is negative and statistically significant. Therefore, a rise in the minimum wage will decrease the probability that someone will be under the poverty threshold. This result is consistent with many of the previous studies done in other developing countries and is especially meaningful for the Korean case because it has faced criticism in recent years for its ineffectiveness. Although the minimum wage policy has contributed to the rise in wages for low income workers in the 1980s when it was first introduced, it has been negatively evaluated for not being effective in alleviating poverty and raising the living standards for low wage workers since the structural reforms of the labor market after the financial crisis in 1997.[6] The results of this study show that the higher the minimum wage, the poverty population tends to decrease. The coefficients are negative through all four levels of poverty.

Age, sex, weekly working hours, and current health conditions are all significant at least the 90%confidence level. The coefficients of these variables are in line with previous studies done with Korean data.

First, our results show that the older population tends to be non-poor. Although it is true that Korea boasts the highest elderly poverty rate, the data that we used did not include a large elderly population, with the average age of our data being 45, as can be seen in Table 2. Taking this into consideration, it falls in line with the results of previous U.S. studies that young adults who make up most

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6) For example, Jeong (2006).

of the labor market will also have the higher probability of falling into poverty.

【Table 2】 Estimated Coefficients of Binary Probit Model with Random Effects (All Surveyed)

	P1	P2	P3	P4
Intercept	9.5830*** (1.5358)	7.6692*** (1.1946)	8.3640*** (1.0889)	15.6508*** (1.0980)
Age	-0.1851*** (0.0182)	-0.2007*** (0.0172)	-0.2599*** (0.0185)	-0.2915*** (0.0204)
Age-squared	0.0022*** (0.0002)	0.0025*** (0.0002)	0.0032*** (0.0002)	0.0036*** (0.0002)
Sex	-0.7429*** (0.0795)	-1.0291*** (0.0724)	-1.4633*** (0.0771)	-1.7430*** (0.0858)
Education	-0.0544 (0.0336)	-0.0546 (0.0341)	-0.0486 (0.0372)	-0.0676 (0.0445)
Education-squared	-0.0018 (0.0016)	-0.0031** (0.0016)	-0.0050*** (0.0017)	-0.0064*** (0.0020)
Location	-0.0343 (0.0719)	-0.0422 (0.0639)	-0.0155 (0.0650)	-0.0552 (0.0683)
Weekly Working Hours	-0.0138*** (0.0017)	-0.0152*** (0.0014)	-0.0118*** (0.0013)	-0.0093*** (0.0013)
Working	0.3430*** (0.1319)	0.4237*** (0.1083)	0.4244*** (0.1059)	0.2303* (0.1085)
Health Condition	-0.0562 (0.0562)	-0.1233*** (0.0431)	-0.1892*** (0.0394)	-0.1456*** (0.0383)
ln (MW)	-0.8533*** (0.1925)	-0.4937*** (0.1493)	-0.2839** (0.1354)	-1.0115*** (0.1348)
GDP growth	-0.0369* (0.0221)	0.0116 (0.0168)	-0.0646*** (0.0151)	0.0146 (0.0147)

Note: *** signifies significance at the 1% level; ** signifies significance at the 5% level; and * signifies significance at the 10% level. Standard errors are indicated in parentheses.

Second, our variable for sex had a mean value of 0.71 indicating that more men were included in the study. We also show that men have a smaller probability than women of being poor. This is also consistent with the concept of 'feminization of poverty' which was introduced in the 1980s in the United States to explain the phenomenon of the majority of the poverty class being women.

Although the proportion of female workers in Korea has drastically increased in recent years, the labor market is still discriminatory against women in terms of wage inequality. In 2004, the average monthly wage of women was 63.15% that of men (Shin, 2007). Therefore, the economic status of women has not improved and has actually led more women to fall into poverty

Third, although statistically insignificant, we find that a person with more years of schooling will less likely fall into poverty. Higher education leads to better chances of receiving higher wages, improving one's chances of becoming poor. We also show that with more weekly working hours and better health conditions, a person will more likely be above the poverty line.

【Table 3】 Marginal Effects of Binary Probit Model with Random Effects (All Surveyed)

	P1	P2	P3	P4
Age	−0.0016*** (0.0003)	−0.0082*** (0.0010)	−0.0266*** (0.0024)	−0.0612*** (0.0049)
Age-squared	1.93e−05*** (0.0000)	0.0001*** (1.0e−05)	0.0003*** (3.0e−05)	0.0007*** (0.0001)
Sex	−0.0112*** (0.0023)	−0.0726*** (0.0085)	−0.2506*** (0.0193)	−0.4898*** (0.0271)
Education	−0.0005 (0.0003)	−0.0022 (0.0014)	−0.0050 (0.0039)	−0.0142 (0.0095)
Education-squared	−1.54e−05 (1.0e−05)	−0.0001* (0.0001)	−0.0005*** (0.0002)	−0.0013*** (0.0004)
Location	−0.0003 (0.0006)	−0.0017 (0.0026)	−0.0016 (0.0067)	−0.0116 (0.0144)
Weekly Working Hours	−0.0001*** (0.0000)	−0.0006*** (0.0001)	−0.0012*** (0.0002)	−0.0019*** (0.0175)
Working	0.0020*** (0.0006)	0.0115*** (0.0021)	0.0311*** (0.0056)	0.0425** (0.0175)
Health Condition	−0.0005 (0.0005)	−0.0052*** (0.0020)	−0.0200*** (0.0045)	−0.0311*** (0.0085)
ln (real MW)	−0.0075*** (0.0022)	−0.0203*** (0.0064)	−0.0290** (0.0139)	−0.2124*** (0.0294)
GDP growth	−0.0003 (0.0002)	0.0005 (0.0007)	−0.0066*** (0.0016)	0.0031 (0.0031)

Note: *** signifies significance at the 1% level; ** signifies significance at the 5% level; and * signifies significance at the 10% level. Standard errors are indicated in parentheses.

As the estimated model is a binary regression, the value of the estimated coefficient does not directly reflect the marginal effect of the explanatory variable on the dependent variable. Table 3 shows the estimated marginal effects for a comparison.

We extricate workers from the entire sample population and include several factors that are exclusive to only workers: whether they work full time or part time, regular work or non-regular work, in a large-to-medium-sized firm or a small firm, and what their working status and type of work is. We find that the overall results are not so different from the previous results that include non-workers.[7] We replicate the analysis, using the same model, for 1,102 workers over the six year period with the same poverty thresholds for P1 through P4. The results are shown in Table 4 below.

We note that the effects of a rise in the minimum wage are smaller for workers. We find that the minimum wage has a positive effect on the level of poverty and at a slightly smaller scale than that in the analysis that included both workers and non-workers. While a 10% increase of the minimum wage reduces the probability of a person in the labor force to be poor by 0.075 from Table 3, the coefficients from Table 4 indicate that the same impact will reduce the probability for workers to be poor by 0.023.

Age and sex move in the opposite direction of the poverty rate, as was the case with workers and non-workers, and education remains an insignificant variable in the analysis. The new variables that were introduced into our second analysis produced the following results: full time and regular workers tend to have a lower probability of falling into poverty as opposed to part time and non-regular

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7) Whether to work or not could be an endogenous decision, if the probability of working is influenced by being poor. If it is, the estimation of workers data may suffer from the selectivity bias. With such a possibility in mind, we present the results for comparison purpose.

【Table 4】 Estimated Results of the Random Effects Binary Probit Model (Workers Only)

	P1		P2		P3		P4	
	Coefficient	Marginal Effect	Coefficient	Marginal Effect	Coefficient	Marginal Effect	Coefficient	Marginal Effect
Intercept	25.4258*** (4.5977)	–	18.7764*** (2.7194)	–	22.5946*** (2.3803)	–	26.8838*** (2.2625)	–
Age	-0.1239*** (0.0425)	-0.0001 (0.0001)	-0.2410*** (0.0378)	-0.0013*** (0.0005)	-0.3182*** (0.0408)	-0.0057*** (0.0016)	-0.3301*** (0.0416)	-0.0241*** (0.0045)
Age-squared	0.0013*** (0.0005)	1.04e-06 (0.0000)	0.0031*** (0.0004)	1.61e-05*** (1.0e-05)	0.0041*** (0.0005)	0.0001*** (2.0e-05)	0.0041*** (0.0005)	0.0003*** (0.0001)
Sex	-0.6137*** (0.1770)	-0.0009 (0.0007)	-1.1295*** (0.1482)	-0.0154*** (0.0051)	-1.9612*** (0.1684)	-0.1336*** (0.0248)	-2.3032*** (0.1635)	-0.4074*** (0.0446)
Education	-0.0437 (0.0932)	-3.46e-05 (0.0001)	-0.0926 (0.0802)	-0.0005 (0.0005)	-0.2332** (0.0962)	-0.0042* (0.0022)	-0.2598** (0.1039)	-0.0190** (0.0084)
Education-squared	-0.0002 (0.0041)	-1.34e-07 (0.0000)	-0.0005 (0.0037)	-2.47e-06 (2.0e-05)	0.0024 (0.0042)	4.31e-05 (0.0001)	0.0008 (0.0045)	0.0001 (0.0003)
Location	0.1934 (0.1626)	0.0002 (0.0002)	0.2916** (0.1323)	0.0015* (0.0009)	0.1509 (0.1364)	0.0027 (0.0025)	0.0604 (0.1289)	0.0044 (0.0093)
Weekly Working Hours	-0.0131*** (0.0051)	-1.03e-05 (1.0e-05)	-0.0116*** (0.0036)	-0.0001** (3.0e-05)	-0.0036 (0.0032)	-0.0001 (0.0001)	0.0043 (0.0031)	0.0003 (0.0002)
Full-time	-0.7787*** (0.2384)	-0.0026 (0.0028)	-0.6169*** (0.2136)	-0.0081 (0.0063)	-0.4348** (0.2182)	-0.0133 (0.0112)	-0.6818*** (0.2625)	-0.0878 (0.0536)
Regular	-0.6498*** (0.2030)	-0.0012 (0.0011)	-0.5405*** (0.1296)	-0.0051* (0.0027)	-0.3889*** (0.1225)	-0.0098* (0.0051)	-0.4221*** (0.1197)	-0.0398 (0.0155)
Health condition	-0.0188 (0.1417)	-1.51e-05 (0.0001)	-0.1258 (0.0904)	-0.0007 (0.0006)	-0.1826*** (0.0782)	-0.0036* (0.0019)	-0.0900 (0.0737)	-0.0068 (0.0059)
Work Status	-0.1944 (0.2141)	-0.0002 (0.0003)	-0.1856 (0.1557)	-0.0012 (0.0014)	-0.2209 (0.1556)	-0.0049 (0.0045)	-0.2916* (0.1557)	-0.0262 (0.0174)
Job type	0.0254 (0.2518)	1.94e-05 (0.0002)	0.2648 (0.1933)	0.0011 (0.0007)	0.2078 (0.1721)	0.0031 (0.0023)	0.2343 (0.1607)	0.0145* (0.0088)
Size of Workplace	-0.2693* (0.1504)	-0.0002 (0.0002)	-0.2675** (0.1058)	-0.0015* (0.0009)	-0.2853*** (0.0305)	-0.0054** (0.0025)	-0.6537*** (0.0936)	-0.0525*** (0.0113)
ln (MW)	-2.8418*** (0.5793)	-0.0023 (0.0019)	-1.7094*** (0.3367)	-0.0090** (0.0039)	-1.7612*** (0.2869)	-0.0318*** (0.0099)	-2.0927*** (0.2699)	-0.1527*** (0.0301)
GDP Growth	-0.1345** (0.0634)	-0.0001 (0.0001)	-0.0259 (0.0370)	-0.0001 (0.0002)	-0.0707** (0.0305)	-0.0013* (0.0007)	0.0109 (0.0282)	0.0008 (0.0021)

Note: *** signifies significance at the 1% level; ** signifies significance at the 5% level; and * signifies significance at the 10% level. Standard errors are indicated in parentheses.

workers, respectively. Although full time workers can also receive low wages, their work tends to be more stable and their total work hours tend to far exceed that of part time workers. Also, non-regular

workers normally receive lower wages and do not get any of the employment benefits that are reserved for regular workers.

The size variable controls for the differences in the size of the firm in which the workers work by categorizing the workplace according to the number of employees: a large-to-medium sized firm of 50 or more workers and a small sized firm of less than 50 workers. This variable becomes more and more significant as the poverty threshold is raised and the estimated coefficient indicates that the larger the firm, the less likely the worker will be under the poverty line.

Ⅵ. Conclusion

The economics of the minimum wage policy has been a controversial question internationally since its inception. In Korea, the issue has received the spotlight with the rise of the poor population and the increasing gap between the rich and the poor since the Asian financial crisis. Even though there are a lot of studies already done on the effects of the policy, there have been difficulties in coming to an agreement about the orientation of that effect.

Most studies in Korea have focused on the disemployment effects of higher minimum wages, arguing that income tends to fall in the informal sector because workers are laid off in the formal sector increasing the flow of labor into the informal sector. They claim that those who actually are in need of the benefits of the policy could end up receiving lower wages. As such, the studies so far have focused on the negative effects of the policy in Korea.

This study looks at the possible effects of the minimum wage policy on reducing poverty rates, as measured by the number of people who fall under the defined poverty threshold. We utilize the Korean Labor and Income Panel Study data to analyze this effect and

find that older generations, the more educated, and men tend to be less poor than their counterparts while those with poor health conditions and less weekly working hours tend to be poor. When we analyze the data of workers only we find that full time and regular workers tend to be above the poverty line while those working in large-to-medium sized firms tend to not fall into poverty as easily as those who work in small firms. However, most importantly, we find that under both cases (of the entire sample population and of only workers) the higher the hourly minimum wage, the smaller the probability of falling under the poverty line. This result is contradictory to the results of many studies done in developed countries where there is usually a negative effect or only a very modest positive effect while it is consistent with those done in developing countries. The results of our analysis show that the minimum wage policy can indeed be used as an effective policy to target the alleviation of poverty and decrease the poverty rate in Korea.

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최저임금제가 빈곤에 미치는 영향

서 지 원* · 정 진 욱**

논문초록

아시아 외환위기 이후 한국의 빈부 격차가 심해지면서, 최저임금제도의 효과와 관련한 연구가 많이 이루어졌다. 대부분의 연구는 최저임금제의 부정적 효과인 실업의 발생에 집중되었다. 이 연구는 최저임금제가 빈곤층을 줄이는 효과가 있는지를 분석한다. 2003-2008 기간의 한국노동연구원 패널자료 (KLIPS)를 임의효과 패널 프로빗 모형으로 추정한 결과, 한국의 최저임금제는 빈곤층이 될 확률을 낮추는 효과가 있었던 것으로 실증되었다.

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