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**Research Report**

## Impact of Regulating Non-Regular Employment on Firms' Employment Decisions

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# KDI

## Policy Forum

### KDI Policy Forum

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# Impact of Regulating Non-regular Employment on Firms' Employment Decisions

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\* Based on Baek and Park (2018) and Park and Park (2016).

# Summary

- **Regulations on the use of non-regular workers can encourage the conversion to regular workers and reduce firms' labor use. They can also increase the use of non-regular employment types that are not subject to the law.**
  - An analysis on the impact of the non-regular employment protection law (2007) on firms' employment decisions found that regular employment increased and non-regular employment (fixed-term/agency workers who fall within the scope of the law) decreased.
  - However, total employment, including non-regular workers, dropped slightly and the use of non-regular workers (contract workers etc.) not subject to the law increased.
  
- **The impact of regulating the use of non-regular workers on firms' employment decisions can vary depending on the degree of rigidity in working conditions for regular employees.**
  - Analysis on the effect of the non-regular employment protection law by firm characteristics showed that conversion to regular status was lower and the use of non-regular workers not subject to the law was higher among firms who believed that the working conditions for regular employees were highly rigid.
  
- **To fulfill the intended goals of the law, measures to ease the rigidity of working conditions for regular employees must be sought.**
  - The conventional concept of labor flexibility needs to be extended to cover working conditions (wage, working hours) to evenly promote workers' demand for job security and employers' need for flexible labor management.

## 1

### Issues

- **The government is pushing to regulate the use of non-regular workers in the public sector to ease the duality of regular and non-regular employment across the economy.**
  - The conversion to regular employment is more difficult in the private than in the public sector. As such, an environment must be created wherein the private sector takes the initiative to increase the number of regular employees.
  
- **Based on empirical analysis results, the following summarizes the policy direction and discussions on minimizing the negative effects of the conversion.**
  - This study looks into the impact of the 2007 non-regular employment protection law, which restricts the use of non-regular workers, and extrapolates the policy implications.

# 2

## Institutional Background

- **The definition of non-regular workers in this study—all employment types under a permanent/full-time contract excluding regular employment—is based on the Economic and Social Development Commission (ESDC)’s 2002 agreement.**
  - As of August 2017, wage workers are composed of non-regular (32.9%), fixed-term (14.7%), part-time (13.4%), service (3.5%) and agency (0.9%) workers.
- **To prevent the exploitation of non-regular workers, the government enacted the non-regular employment protection law in July 2007.**
  - The Act on the Protection, etc. of Fixed-Term and Part-Time Workers and the Act on the Protection, etc. of Temporary Agency Workers are referred to collectively as the non-regular employment protection law, which centers around limiting the length of employment and correcting the discrimination of workers based on employment type (Table 1).
  - This study focuses particularly on the limitation on the employment period of fixed-term and agency workers to two years.

<Table 1> Summary of the Non-regular Employment Protection Law

1. Limitations on the employment period of fixed-term/agency workers	2. Correction of the discrimination of part-time/ fixed-term/temporary agency workers
<ul style="list-style-type: none"> <li>• Fixed-term workers: Conversion to permanent status after two years of continuous employment (considered non-fixed term worker)</li> </ul>	<ul style="list-style-type: none"> <li>• Differential treatment is only permitted on reasonable grounds e.g. labor quality or intensity, differences in authority or accountability</li> </ul>
<ul style="list-style-type: none"> <li>• Temporary agency workers: Conversion to direct employment after two years</li> </ul>	<ul style="list-style-type: none"> <li>• Applied sequentially based on the size of workplace               <ul style="list-style-type: none"> <li>- 300+ workers: Jul. 1, 2007</li> <li>- 100+ workers: Jul. 1, 2008</li> <li>- 5+ workers: Jul. 1, 2009</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Applied to workplaces with five or more workers from Jul. 1 2007</li> </ul>	

# 3

## Significance of the 2007 Non-regular Employment Protection Law on Firms’ Employment Decisions

- **Using the 1st-4th Workplace Panel Survey (2005; 2007; 2009; 2011), this study estimated the effects of the non-regular employment protection law on firms’ employment decisions.**
  - As the law regulates the use of fixed-term and temporary agency workers, firms that had a higher share of such workers before the enactment would be more affected.
    - Firms with no fixed-term and agency workers would not be particularly influenced.
  - An examination was conducted into whether firms’ employment decisions after the enactment (2007-2011) were affected by the share of fixed-term and temporary agency workers that were hired prior (2005).

**<Table 2> Effects of the Non-regular Employment Protection Law on Firms' Employment Decisions**

(natural log)

Dependent variables	Employment Decisions				
	Total employment	Regular workers	Non-regular workers	Fixed-term + temp. agency workers	Other non-regular workers
Degree of impact of the enactment period after enactment*	-0.321*** (0.100)	1.149*** (0.152)	-3.387*** (0.291)	-5.331*** (0.329)	1.013*** (0.329)
Sample size	5,809	5,809	5,809	5,809	5,809
Adjusted R-squared	0.897	0.870	0.627	0.679	0.408

*Note:* The dependent variable is the natural log value of the number of employees and explanatory variable is the interaction term of the enactment of the non-regular employment protection law and impact level on firms measured by the share of fixed-term and temp. agency workers in 2005. The control variable includes variables for firms (overseas share holdings, business type, labor union and performance-based bonus system), dummies for respective firms, industry, region and year and interaction term of year and industrial dummies and for firm size and time trend. The standard errors in parentheses are clustered at firm level. Statistical significance level: \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.

*Source:* Summary of <Table 2> from Baek and Park (2018).

*Raw data:* Korea Labor Institute, 1st-4th Workplace Panel Survey.

■ According to the results, the non-regular employment protection law caused ① employment to decline but ② increased the share of both regular and ③ non-regular workers (contract workers, etc.) not subject to the limitation on employment period (Table 2).<sup>1)</sup>

- Firms with a higher share of fixed-term and temporary agency workers before the enactment exhibited a smaller decline in employment after the enactment.
  - Total employment receded by roughly 3.2% in relative terms after the enactment in firms with a 10%p higher share of fixed-term and temporary agency workers before the enactment.
- By employment status, the share of fixed-term and temporary agency workers decreased while that of regular workers increased after the enactment, but this also meant an increase in the number of other non-regular workers (contract workers, etc.) who are not subject to the limitation on employment period.
  - The employment of regular workers rose by about 11.5% in relative terms after the enactment in firms that had a 10%p higher share of fixed-term and agency workers.

■ The effects of the non-regular employment protection law were found to be heterogeneous according to firm characteristics (union or non-union), which are closely tied to the rigidity of the working conditions for regular workers (Table 3).

- Total employment receded slightly, regardless of the existence of a labor union, but markedly different effects were observed in the composition of employment type.
  - Workplaces with a labor union posted a relatively large increase in non-regular workers while workplaces without showed a considerably high increase in regular workers.

1 Results in <Table 2> are largely consistent with major findings from preceding literature on similar topics. But this study is distinguishable as the authors analyzed the general, not certain age group-specific, effects brought on by the non-regular employment protection law. For instance, preceding literature by Nam and Park (2010) and Yoo and Kang (2012; 2013) used the same age group (near 55yrs) to analyze the employment effects of the Act on the Protection, etc. of Fixed-Term and Part-Time Workers, using the labor survey

# 4

## Employer Survey on the Non-regular Employment Protection Law (Act on the Protection, etc. of Fixed-Term and Part-Time Workers)

**<Table 3> Effects of the Non-regular Employment Protection Law by Firm Characteristics**

(natural log)

Dependent variables	Characteristics				
	Total employment	Regular workers	Non-regular workers	Fixed-term and agency workers	Other non-regular workers
<b>Panel A: Workplace without a union</b>					
Degree of impact of the enactment period after enactment*	-0.357*** (0.119)	1.263*** (0.191)	-3.022*** (0.345)	-4.843*** (0.382)	0.689* (0.360)
Sample size	3,403	3,403	3,403	3,403	3,403
Adjusted R-squared	0.850	0.809	0.565	0.626	0.394
<b>Panel B: Workplace with a union</b>					
Degree of impact on firms from the enactment*	-0.365* (0.188)	0.815*** (0.225)	-4.799*** (0.620)	-7.032*** (0.636)	1.635** (0.800)
Sample size	2,406	2,406	2,406	2,406	2,406
Adjusted R-squared	0.904	0.886	0.635	0.698	0.404

Note: Refer to note in <Table 2>.

Source: Summary of <Table 2> from Baek and Park (2018).

Raw data: Korea Labor Institute, 1st-4th Workplace Panel Survey.

- **Due to the heterogeneous nature of the effects of the non-regular employment protection law according to the characteristics of firms, additional analysis was conducted on the employers response measures to the limitation on the employment period of non-regular (fixed-term) workers.**
  - Considering that fixed-term workers account for a higher share (14.7%) than temporary agency workers (0.9%) of those subject to the law, the survey questions were focused on the former.
  - CEOs (or HR managers) from 1,000 randomly selected firms with 50 or more employees as of September 2016 were questioned regarding their conversion plans for and treatment of fixed-term workers after the two-year threshold.
  - Refer to the Box below for further details.
- **With all other conditions the same, firms having more difficulties in amending working conditions were found to be more reluctant to convert to non-fixed term/regular employment terms (Table 4).**
  - A 1-point increase in “difficulty in amending working conditions” (0–10 scale) causes a 2.8%p decrease in the probability of conversion to non-fixed term status and a 2.6%p decrease in the probability of the equal treatment of converted workers.

- A two-fold increase (1-natural log) in the number of employees reduces the probability of conversion to non-fixed term status by 8.4%p and probability of equal treatment by 5.6%p.
  - On the other hand, sales sensitivity to business cycles, level of performance-based pay, work complexity and labor unions were found to have statistically insignificant correlations.
- **<Table 3> shows that the effects of the non-regular employment protection law can vary according to the existence of a labor union. Such a result appears to be more due to the employer's perceptions about the rigidity of working conditions than the labor union itself.**
- When rigidity is controlled, the existence of a labor union had little relevance in the conversion of employment status and treatment of converted workers (first and second rows in Table 4).
  - Meanwhile, larger firms with labor unions are likely to have more difficulties in amending working conditions (third row in Table 4).
  - These results imply that the existence of a labor union is related to the demand for non-regular workers through the rigidity of working conditions.

**[Box] Summary of the Employer Survey on the Demand for Fixed-term Workers**

- **Regarding the restrictions on using fixed-term workers, the questions asked ① whether the employer had plans to convert fixed-term workers to non-fixed term/regular status (after 2yrs) and ② whether the employer treats converted workers the same as existing regular workers in terms of wage and work demand.**
- In ①, respondents were reminded that the law stipulates that the continued employment of fixed-term workers shall not exceed two years, after which all such workers must be converted to non-fixed term/regular status or let go. They were then asked to gauge the probability of “conversion” or “dismissal.” Those who chose 0% for the latter were considered to have intentions of conversion to non-fixed term status.
  - In ②, 580 firms with non-fixed term workers were questioned and 53.8% (312) answered that non-fixed term and regular workers were treated equally.
- **The characteristics of firms encompassed in this study include not only general attributes such as industry (main category), location (metropolitan municipality), size (no. of employees), labor unions, etc. but also the employer's subjective perceptions about factors that will likely affect the demand for non-regular workers, such as sales sensitivity to business cycles, work complexity, difficulties in changing working conditions and the level of performance-based pay.**
- The sales sensitivity to business cycles (0-10 scale) measures the volatility of product and service demand.
  - Work complexity is measured by the time (months) it takes for new regular workers to master the work.
  - Difficulties in amending work conditions (0-10 scale) examines how difficult it is to amend employment rules and collective agreements.
  - The level of performance-based pay (0-10 scale) is measured by how much workers' performance is reflected in the payroll.

**<Table 4> Demand for Non-regular Workers by Firm Characteristics and the Rigidity of Working Conditions**

Dependent variables	Are you planning to convert fixed-term workers to non-fixed term or regular status after two years? (yes=1)	Do you treat non-fixed term workers equally to existing regular workers? (yes=1)	How difficult is it to amend working conditions? (0-10)
Difficult to amend working conditions (0-10)	-0.0278*** (0.00640)	-0.0264*** (0.00843)	
Presence of a union (yes=1)	0.0495 (0.0432)	0.0534 (0.0575)	0.638*** (0.243)
No. of employees (natural log)	-0.0844*** (0.0222)	-0.0558* (0.0286)	0.257** (0.114)
Sales sensitivity to business cycles (0-10)	0.00280 (0.00687)	0.00923 (0.00938)	
Period for new employee to master work (months)	-0.00479 (0.00369)	-0.00588 (0.00493)	
Level of performance-based pay (0-10)	-0.00282 (0.00553)	-0.00780 (0.00777)	
Industry type (main category)	Controlled	Controlled	Controlled
Location (metropolitan municipality)	Controlled	Controlled	Controlled
Sample size	1,000	580	1,000
Adjusted R-squared	0.083	0.094	0.051
Sample average of dependent variables	0.624	0.538	5.066

*Note:* The analysis in the second row was conducted on firms (580) employing non-fixed term workers while those in the first and third rows had dummy variables for industry type (18 main categories, excl. public administration) and location (17 metropolitan municipalities) controlled additionally. Huber-White standard errors are in the parentheses. Statistical significance level: \*\*\*p<0.01, \*\*p<0.05, \*p<0.1.

*Source:* Korea Development Institute, *Labor Market Demand Survey on Fixed-term Employment*, Aug. 2016.

# 5

## Summary and Conclusion

- **Analysis on the impact of the non-regular employment protection law (2007) on firms' employment decisions found a slight decrease in total employment but certain increases in regular and other non-regular workers (contract workers and subcontractors).**

- The effects analyzed based on firm characteristics revealed that workplaces with a labor union witnessed a relatively smaller increase in regular workers and higher increase in the use of other non-regular workers, compared to workplaces without a union.

- **The survey found that employers who had more difficulties in changing working conditions were more reluctant to convert non-regular workers to regular status.**

- It was also found that employers facing difficulties in adjusting working conditions were also less likely to treat indefinite contract workers and regular employees equally.



2 For instance, since the 2007 law to limit the continuous employment of fixed-term workers to two years, there have been attempts to extend the period, e.g. one in 2009 attempted to extend the period to four years and another in 2015 to apply a four-year threshold to those age 35 or more who desired an extension.

■ **To alleviate the dual employment structure, measures to regulate the excessive use of non-regular workers must be sought and the flexibility of working conditions for regular workers (70% of total wage workers) must be enhanced.**

- Preceding policies on non-regular workers were focused on the level of regulation in terms of using non-regular workers.<sup>2)</sup> However, legal regulations alone cannot achieve a simultaneous upgrade of both the quantity and quality of employment, and may even widen the gap between those under the protection of the law and those outside that protection.
- The conventional concept of labor flexibility should be extended to cover working conditions (wage, working hours) to evenly promote job security for workers and flexible labor management for employers.

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