

# Maximizing the Benefits of Internationalization: The Moderating Role of Labour Flexibility

## Accroître les bénéfices de l'internationalisation : le rôle modérateur de la flexibilité du travail

## Maximizar los beneficios de internacionalización: El rol moderador de la flexibilidad laboral

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Résumé de l'article

En s'appuyant sur une enquête à grande échelle, le « Panel d'enquête coréen sur les milieux de travail » (*Korean Workplace Panel Survey*), la présente étude examine l'interaction entre diversification internationale, flexibilité du travail et rendement au travail en contexte de marchés avancés émergents. Afin de combler les écarts dans la littérature sur la relation entre rendement et diversification internationale — laquelle met principalement l'accent sur les caractéristiques de l'entreprise et néglige le rôle des facteurs liés au travail comme variables conditionnelles —, nous attirons l'attention sur les dynamiques en cours au niveau du milieu de travail en explorant comment les deux types de flexibilité du travail, soit la flexibilité fonctionnelle et la flexibilité numérique, atténuent l'effet de la diversification internationale sur le rendement. Les résultats montrent que lorsque, dans les milieux de travail, on investit dans des programmes de formation en vue de l'élargissement des tâches et la participation des salariés afin d'accroître la flexibilité fonctionnelle, le lien entre diversification internationale et rendement devrait se renforcer.

Ces résultats appuient l'assertion de la littérature internationale sur la gestion des ressources humaines à l'effet que, dans un environnement commercial sans cesse globalisé, l'investissement en capital humain constitue une meilleure stratégie pour améliorer la performance financière à long terme. De plus, nous constatons que la flexibilité numérique, telle que déterminée dans les ententes de sous-traitance internes, a une influence négative sur la relation entre rendement et diversification internationale. Globalement, notre étude suggère que la qualité des ressources humaines et une configuration bien conçue du milieu de travail peuvent aider à améliorer la performance dans un environnement de diversification internationale, tandis qu'une dépendance excessive à l'égard de l'externalisation de l'emploi dans le but de réduire les coûts est susceptible de plomber non seulement la performance financière, mais aussi le développement à long terme. Nous pensons également que nos résultats relatifs à une économie de marché émergente avancée ajoutent aux observations rapportées dans d'autres études qui portaient principalement sur les économies occidentales avancées, constituent un enrichissement des théories actuelles sur la flexibilité du travail.

# Maximizing the Benefits of Internationalization: The Moderating Role of Labour Flexibility

Heung-Jun Jung, Sung-Chul Noh and Sun-Wook Chung

**Using the large-scale *Korean Workplace Panel Survey*, this study explores the interplay between international diversification, labour flexibility, and workplace-level performance. We elucidate two distinct types of labour flexibility as moderators of the impact of international diversification on financial performance. The results show that functional flexibility strengthens the positive impact of international diversification on financial performance, whereas numerical flexibility weakens it. Therefore, our study suggests that the quality of human resources and a well-designed workplace configuration play a crucial role in achieving the intended effects of international diversification. It also provides insight into employment relations in advanced emerging markets marked by a small, open economy structure, government-aided international experience, and conflict-laden labour relations.**

**KEYWORDS: international diversification, functional flexibility, numerical flexibility, workplace performance.**

## Introduction

A dramatic restructuring of employment patterns across national borders has been observed over the past few decades, and labour flexibility—an organization's capacity to adapt to various external demands (Wright and Snell, 1998)—has now become a popular topic in the field of industrial relations (Kalleberg, 2001; Katz *et al.*, 2007; Kuruvilla *et al.*, 2011). Scholars have developed various categorizations of flexibility (e.g., Atkinson, 1984; Cappelli and Neumark, 2004; Wilthagen and Tros, 2004), and one such categorization involves functional vs. numerical flexibility (Atkinson, 1984). Functional flexibility refers to an organization's ability

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to deploy its workforce across traditional job categorizations, while numerical flexibility is defined as an organization's ability to adjust the level of labour input to meet external changes (Atkinson, 1984; Kalleberg, 2001). Numerical flexibility is further divided into internal numerical flexibility, which focuses on adjusting working hours, and external numerical flexibility, a degree of variability in the size of the workforce (Begin, 1997; Wilthagen and Tros, 2004).

Regarding the implications of labour flexibility, one group of scholars suggests that functional flexibility (such as job rotation and cross-functional teams) and related high-commitment or involvement work practices have become popular among global firms as they contribute to promoting firm performance in multiple ways (Arthur, 1992; Delery and Doty, 1996; Batt, 2002; Collins and Smith, 2006; Sun *et al.*, 2007; Takeuchi *et al.*, 2007). On the other hand, another group of scholars argues that globalization and, subsequently, harsh competition, have led employers to rely more on the externalization of employment (such as subcontracting). At the same time, large global staffing agencies (e.g., Manpower and Adecco) have emerged as active agents of the externalization of employment to meet the demand of employers for numerical flexibility (Peck *et al.*, 2005). However, despite speculation on the benefits of labour flexibility among industrial relations scholars, few studies have attempted to juxtapose these two types of flexibility and examine their implications for the financial performance of contemporary workplaces actively engaging in international diversification (Michie and Sheehan, 2005).

The aim of the present study is to explore how labour flexibility affects the relationship between workplaces' international diversification and performance (hereafter, IDP). In a nutshell, two types of labour flexibility are compared and contrasted in terms of their distinct roles in moderating the IDP relationship in the Korean context, providing insights into labour flexibility in advanced emerging markets. In so doing, this study makes several significant empirical and theoretical contributions. First, the findings of this study contribute to our understanding of the ramifications of international diversification by illuminating workplace-level factors that have been largely understudied in the existing literature (Walsworth and Verma, 2007). Second, the present study adds insights to the literature on labour flexibility by comparing the moderating roles of functional and numerical flexibility in the IDP relationship. Finally, we draw attention to the context of an advanced emerging economy, a much-needed complement to the nearly exclusive focus of the current literature on labour flexibility in developed economies.

This article is structured as follows. First, we provide a background of the Korean context and briefly review the literature on international diversification and its impact on financial performance. Then, we highlight how the two types

of labour flexibility may affect the IDP relationship, outlining the hypotheses to be tested. Subsequently, we present information on the sample and methodology used in the study and an overview of the main results. Finally, we discuss the implications and limitations of our research and suggest avenues for future research.

## The Korean Context

Our theoretical framework is based on the Korean context in which firms have experienced rapid foreign expansion and a transformation in employment relations practices over the past several decades (Katz *et al.*, 2004; Kim and Kim, 2003). The outward foreign direct investment of Korean firms exponentially increased from \$270 million in 1990 to \$35.12 billion in 2013 (Korean Export-Import Bank, 2014). Several internal factors that have pushed Korean firms to expand internationally also deserve attention. Early on, the small size of the Korean domestic market forced its firms to aggressively expand in foreign markets. In addition, the overall atmosphere of conflict-laden labour relations in Korea has motivated its firms to relocate their production facilities abroad, especially in Southeast Asia where labour unions are less militant. Last but not least, both general trading firms (e.g., LG, Samsung, and Hyundai) and semi-government organizations (e.g., the Export-Import Bank-EXIM Bank, and the Korea Trade-Investment Promotion Agency-KOTRA) have helped Korean firms expand internationally.

The need to adjust to global competition and respond to production fluctuations has led Korean firms to seriously consider reductions in their labour costs (Kim and Kim, 2003). In particular, the 1997 Asian financial crisis created critical momentum to transform employment relations practices from an internal labour market to a more flexible one, resulting in a drastic increase in various types of precarious employment arrangements (Yang and Rowley, 2008; Kim and Lee, 2014). Thus, the Korean context provides an ideal setting for research on the interplay between the growing trends of international diversification and labour flexibility.

Further, the current knowledge on labour flexibility has been largely developed based on the studies of Western companies with an implicit assumption that it is equally applicable to other parts of the world, since globalization generates pressures for the convergence of HRM practices across nations (Locke and Thelen, 1995). However, an increasing number of studies have shown that the transfer of HRM practices and their implications are the complex outcome of the interplay between globalizing forces and the national employment relations system (Quintanilla and Ferner, 2003). It is therefore necessary to explore the dynamics of the relationship between internationalization and various types of labour flexibility in

non-western institutional contexts. In this sense, our study represents an opportunity to take a close look at labour flexibility and its implications in the context of an advanced emerging market marked by a small, open economy structure, government-aided international experience, and conflict-laden labour relations (Tsai, 2014)<sup>1</sup>.

## Theoretical Background and Hypotheses

### International Diversification and Financial Performance (IDP)

“International diversification” refers to a strategy through which “a firm expands the sales of its goods or services across the borders of global regions and countries into different geographic locations or markets” (Hitt *et al.*, 1997: 767). By establishing subsidiaries or production facilities in foreign countries, local companies can broaden the market for their products across national boundaries and capitalize on lower labour costs in the host countries.

In positive terms, as firms operate in multiple countries, they can gain global knowledge and know-how and thus enhance their cross-cultural understanding (Friedman, 2007). In addition, international diversification may also heighten a firm’s commitment to innovation (Mitchell and Coles, 2003). From a local partner standpoint, establishing a joint venture in foreign countries with leading MNCs may provide opportunities for local firms to incorporate the latest technologies in their fields (Luo and Tung, 2007). Not surprisingly, an unprecedented number of firms in both developed and developing economies have internationalized their operations to boost their financial performance (Berger *et al.*, 2000; Luo *et al.*, 2005; Noland and Pack, 2004).

However, a growing body of research has shown that international diversification does not necessarily translate into better performance. For instance, based on transaction cost theory, Hennart (2007) suggests that, for multinational corporations (MNCs), geographical distance from their home countries is associated with additional costs related to obtaining local knowledge and managing local employees. As MNCs tend to operate in unfamiliar countries for the purposes of sales growth, they are likely to experience the liability of foreignness, which arises from increased political risks, foreign exchange risks, and management costs (Zaheer, 1995). Therefore, geographical diversification may have a negative impact on profit stability. As such, there have been studies illuminating the negative results of firms’ international diversification (e.g., Denis *et al.*, 2002; Geringer *et al.*, 2000).

Given the mixed findings on the efficacy of international diversification, a growing number of studies have attempted to unpack the black box of the IDP relationship. Thus far, scholars have identified various moderating variables in

the relationship between international diversification and firm performance. They include R&D intensity (Kotabe *et al.*, 2002), resources (Chen *et al.*, 2014), product diversification (Bausch and Krist, 2007), and attainment discrepancies (Lin *et al.*, 2011). Building on this stream of research but departing from these firm-level variables, our study elucidates the role of workplace-level characteristics of employment relations, especially two distinct types of labour flexibility (functional and numerical), in the IDP relationship.

## **Workplace Flexibility**

### **Functional Flexibility in the IDP Relationship**

Functional flexibility refers to an organization's ability to deploy the workforce across traditional job categorizations (Atkinson, 1984; Kalleberg, 2001). At the individual level, it can be seen as the extent to which an individual employee possesses a broad repertoire of behavioural scripts that allows him or her to adapt smoothly to various non-routine, situation-specific demands (Bhattacharya *et al.*, 2005).

Theorists have suggested that functional flexibility and related flexible working practices promote workplace performance in myriad ways (Arthur, 1992; Delery and Doty, 1996; Batt, 2002; Collins and Smith, 2006; Sun *et al.*, 2007; Takeuchi *et al.*, 2007). This perspective is based on the following rationale. First, the greater ability of employees to perform multiple tasks enhances labour productivity and workplace innovation, both of which are key elements for an establishment's survival in a globally competitive environment (Zhu, 2004; Preenen *et al.*, 2015). Specifically, job rotation and enrichment help equip employees with a broader knowledge base that enables them to be more receptive to external changes and, in turn, to improvise new sequences of action in performing their daily duties (Dyer and Ericksen, 2005). Moreover, increased control over their work processes may promote employee commitment to and motivation for continuous workplace innovation (Gough *et al.*, 2006; Valverde *et al.*, 2000). In this light, Walsworth and Verma (2007) argue that adopting functional flexibility enlarges the competitive advantages of a workplace, not only by increasing productivity but also by facilitating innovation among workers, especially in an internationalized context.

Second, a high level of functional flexibility contributes to enhancing financial performance by reducing the costs associated with production processes. A greater capability to multi-task allows employees to adjust to other jobs in response to a variety of demands in the international market, without many extra costs (Roca-Puig *et al.*, 2008). In a similar fashion, a multi-skilled workforce helps workplaces minimize the costs of delayed changes and missed opportunities in a

globally competitive environment by shortening the time required to move employees into new jobs (Berg and Velde, 2005).

Thus, a workforce that is highly-trained in various areas and has in-depth knowledge of multiple work processes allows the workplace to maintain an appropriate portfolio of human assets and adapt to the ever-shifting demands of a globalized market (Cappelli and Neumark, 2004). Furthermore, once a wider array of skill configurations has been developed among employees through functional flexibility, these skill sets, which are complex and difficult to imitate, constitute a source of competitive advantage in the workplace (Bhattacharya *et al.*, 2005; Valverde *et al.*, 2000). This discussion leads to the following hypothesis:

**HYPOTHESIS 1:** The positive relationship between the level of international diversification and financial performance will be moderated by functional flexibility, such that the former will be stronger when the latter is higher.

### **Numerical Flexibility in the IDP Relationship**

In general, numerical flexibility refers to the ability of a workplace to adjust the quantity of labour input (Kalleberg *et al.*, 2000; Vosko, 2000). While employers may attain 'internal' numerical flexibility by embracing variable work hours for their regular workforce (e.g., overtime, job sharing or part-time work), the current study focuses on 'external' numerical flexibility, which accompanies the externalization of internal roles and positions through various types of precarious work arrangements (e.g., temporary agency arrangements or fixed-term contracts). The latter is rapidly surpassing the former in advanced emerging market contexts (McIlroy *et al.*, 2004; Michie and Sheehan, 2001, 2005).

Among other methods, subcontracting tends to be regarded as the most common way to increase external numerical flexibility (Görg and Hanley, 2011; McCann, 2011). While this practice usually refers to a work arrangement in which a peripheral part of a product is produced and delivered by a subcontractor, a variant is in-house subcontracting, whereby non-standard employees hired by a subcontractor are sent to the workplace of a client firm to work with or be supervised by its regular employees in the production process. Under this arrangement, non-standard workers are often assigned to the core manufacturing process of a product, and carry out the same tasks as standard employees (Eun, 2012). Given that the client firm benefits from lower labour and administrative costs, while keeping direct control over subcontracted employees, this work arrangement is gaining ground in the manufacturing industry in advanced emerging economies. For instance, the number of in-house subcontracting workers far exceeds that of standard workers in the shipbuilding industry in South Korea (Eun, 2012).

Traditionally, employers tend to use subcontracting or temporary agency work as a union-avoidance tactic, especially when relocating production facilities abroad, because precarious workers have difficulty organizing themselves into unions or taking costly collective action (Parker, 1994; Lawler, 1990). Local governments may also play a supplementary role in the spread of non-standard work arrangements, such as in-house subcontracting, by redesigning labour and industrial relations laws to create an unfettered labour market and make it easier for foreign investors to fill previously standard jobs with non-standard workers. Developing countries in particular are likely to form a labour-related coalition with MNCs to attract foreign investment (Frenkel and Peetz, 1998).

The externalization of the workforce may enable firms to easily recruit or dispose of their labour force without changing the size of their core workforce (Cappelli and Neumark, 2004; Gough *et al.*, 2006; Matusik and Hill, 1998). However, this externalization has also been criticized due to its limitations with regard to human resource development, which likely offsets the benefits of cost reduction in the long term (Bacon and Blyton, 2000; Mackenzie and Forde, 2009). Specifically, as workers employed by a third party are often marginalized in terms of their opportunities for skill development, firms reassigning them core tasks may struggle to engage in continuous efforts towards quality improvement and may not be aligned with market needs (Arvanitis, 2005). Furthermore, past studies have shown that the job insecurity inherent in precarious work arrangements is associated with negative psychological outcomes, including high job stress and low organizational commitment and job satisfaction, all of which are negatively related to labour productivity (Probst, 2002; Kuhnert *et al.*, 2012). Taken together, these downsides of external numerical flexibility could act as major obstacles to sustaining long-term economic growth. Therefore, we propose that numerical flexibility based on the use of in-house subcontracting will likely reduce the potential benefits that international diversification can provide.

**HYPOTHESIS 2:** The positive relationship between international diversification and financial performance will be moderated by the level of numerical flexibility, such that the former will be weaker when the latter is higher.

## Research Methods

### Data

To test the hypotheses in this study, we estimated the moderating effect of labour flexibility on the IDP relationship using a large-size longitudinal survey of workplaces drawn from the *Korean Workplace Panel Survey* (KWPS). The KWPS is a government-funded, bi-annual nationwide survey conducted by the Korea Labour Institute (KLI) since 2005. The sample for the KWPS was selected through



a stratified sampling of all private and public establishments with more than 30 employees, including 290 public workplaces and 1,615 private workplaces. The collected sample is understood to represent the Korean workplace (Kim and Lee, 2014; Lee and Kim, 2010; Stainback and Kwon, 2012). Replicating the structure of the *Workplace Employee Relations Survey* (WERS) in the U.K. and the *Workplace and Employee Survey* (WES) in Canada, the KWPS includes questionnaire items on various employment relations issues (e.g., HRM and IR practices) as well as financial data. The survey is conducted through face-to-face interviews with HR managers and IR representatives.

The present study primarily used data from the sections on HR practices and financial performance. As the data set from the first wave (2005) did not ask key questions, such as the percentage of foreign sales out of total sales, only the data sets from the 2007, 2009, and 2011 surveys were used for the longitudinal data analysis. In addition, we eliminated all public workplaces from our analysis because public sector organizations, by nature, are known to place less emphasis on financial performance.

## Measures

### Independent variable

Based on Geringer, Beamish, and Costa (1989), international diversification was measured by the ratio of Foreign Sales to Total Sales (FSTS) for each workplace. FSTS is widely accepted as the single most reliable measure of international diversification in the international management literature (Chen *et al.*, 2014; Gomes and Ramaswamy, 1999; Grant, 1987; Reuber and Fischer, 1997).

### Dependent variables

We chose return on equity (ROE) as a proxy variable for the financial performance of the workplace. ROE has been one of the commonly used variables in international business literature because it reflects the investors' return, including that of foreign shareholders. Furthermore, employers often use a numerically flexible labour strategy such as layoffs to improve investors' short-term returns (Beyer and Hassel, 2002). In this light, ROE appeared appropriate for capturing financial performance in the theoretical framework presented here. In this study, ROE was measured as the ratio of net profits to total equity in the workplace (Ebben and Johnson, 2005).

### Moderating variables

The moderating variables examined in this study are indicators of two types of labour flexibility, functional and numerical flexibility. As a proxy variable

for functional flexibility, we used the extent to which a workplace provided employees with training in multi-tasking. It is known that functional flexibility is closely related to continuous investments in training employees so that they can maintain high levels of multi-functionality (Way, 2002). In this light, previous studies have measured functional flexibility using indicators capturing training in multi-tasking (Cappelli and Neumark, 2004; Cordero *et al.*, 1993). In the present study, training in multi-tasking was measured on a scale ranging from 1 to 6, indicating the percentage of employees who were trained for job rotation (1 = less than 20%, 2 = between 20% and 40%, 3 = between 40% and 60%, 4 = between 60% and 80%, 5 = between 80% and 99%, 6 = 100%).

Second, as mentioned earlier, the use of in-house subcontracting was adopted as a proxy for numerical flexibility. Subcontracting has long been deemed the representative measure of the externalization of a regular workforce (Hempell and Zwick, 2005). In particular, we focused on in-house subcontracting, which has become prevalent among manufacturers in the advanced emerging market context (Eun, 2012). In our analysis, in-house subcontracting was measured by the ratio of in-house subcontracted workers to the total number of workers in a workplace.

### Control variables

We controlled for six variables which, based on previous studies, may influence the IDP relationship. First, workplace age and size were included as control variables because workplace performance is likely to be affected by the accumulation of experience, knowledge, and capacity over time (Murphy, Traylor, and Hill, 1996). Workplace size and age were represented by the natural logs of the number of employees in the workplace and the number of years since the establishment of the workplace, respectively. Second, we controlled for the degree of market competition that a workplace was facing because the intensity of competition in the global market impacts financial performance. In line with much of the prior research (Karuna, 2007), we used a single measure of competition based on the following question to HR managers; "How intense is product market competition in your industry?" (1 = competition is extremely weak, 5 = competition is very strong). Third, unionization was controlled for due to its potential impact on financial performance. For instance, union action may restrict employers' decision-making, which in turn influences performance (Freeman and Medoff, 1984). To measure unionization, we created a union dummy variable with a value of 1 if the workplace was unionized, and a value of 0 otherwise. Fourth, we controlled for R&D intensity because previous studies have suggested that it is one of the key factors affecting the financial performance of firms in internationalized contexts (e.g., Bernstein, 1996). In the current study, R&D intensity was calculated as the

ratio of total R&D investments to total sales. Finally, we included capital intensity as a control variable because it is a significant predictor of financial performance (Datta *et al.*, 2005; Huselid, 1995). We computed the level of capital intensity as the logarithm of fixed assets divided by total employees.

## Data Analysis

Instead of using a cross-sectional approach, we tested our hypothesis using panel (pooled time-series cross-section) data to address the temporal dimensions of the dynamics between labour flexibility and the IDP relationship. A longitudinal approach provides several advantages for data analysis. First, pooling multiple observations for each workplace increases the sample size and the degrees of freedom. It is also possible to control for effects that are not detectable in a cross-sectional analysis (e.g., temporal effects). Specifically, panel data enables us to reduce the measurement bias arising from the aggregation of workplaces and any unobserved heterogeneity. In this regard, Glaum and Oesterle (2007) asserted the necessity of a longitudinal approach given the highly complex nature of the internationalization process. The basic equation used in this analysis was the following:

$$y = a_i + b_{it}x_{it} + e_{it}, i = 1, \dots, N, t = 1, \dots, T,$$

where  $b_{it}$  is the set of coefficients for the explanatory variables  $x_{it}$  and  $e_{it}$  is a random error term with a mean of zero and constant variance. While  $a_i$ , which represents the workplace effect, is assumed to be constant over time and specific to the individual cross-sectional unit in the fixed-effect model, it is interpreted to be a Gaussian random variable for each workplace in the random effect model. To determine a more appropriate model, we compared the models using Hausman's test (Hausman, 1978). The results confirmed that the fixed-effect model was more appropriate for our analysis ( $\chi^2 = 18.98, p < .10$ ).

## Results

Table 1 reports descriptive statistics and the correlation matrix for the key variables included in this study.

In order to minimize concerns with multicollinearity, the variance inflation factors (VIF) and tolerance values were calculated. All observed VIF values (the highest value: 1.35) are well below 10 and tolerance values (the lowest value: 0.74) are higher than 0.20, indicating that multicollinearity did not have a significant influence in the estimation (Myers, 1990; Menard, 1995). In addition, the graphical analysis we used to evaluate homoscedasticity did not show any particular pattern suggesting the presence of heteroscedasticity.

**TABLE 1**  
**Descriptive statistics and correlations among variables**

Variables	Mean	S.E	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Workplace age	25.40	16.68	1									
(2) Workplace size	5.07	1.26	.29**	1								
(3) Market competition	3.82	.96	-.00	.08**	1							
(4) Unionization	.39	.49	.33**	.43**	-.09**	1						
(5) R&D intensity	43.71	2397.25	-.02	-.02	.00	.02	1					
(6) Capital intensity	5.59	1.61	.19**	.12**	-.01	.17**	.06**	1				
(7) FSTS	10.92	22.27	.02	.12**	.00	-.01	.06**	.15**	1			
(8) Training in multi-tasking	3.03	1.68	.04	-.02	-.06*	.09**	-.07*	.04	-.12**	1		
(9) In-house subcontracting ratio	3.62	10.51	.03*	.12**	.04*	.13**	-.00	.21**	.05**	-.03	1	
(10) ROE	.13	8.13	-.00	-.01	.00	-.01	-.00	-.01	-.02	-.02	-.00	1

Significance is indicated at the 0.01\*\*level and the 0.05\*level.

Table 2 reports the results of the regression analysis based on the fixed-effect model to test our hypotheses. First, the R-squared value of the Model 2 in Table 2 is .02, and the result of F test is highly significant at the .001 level, suggesting that the model fit the data well. Model 2 shows that FSTS values are positively and significantly associated with ROE ( $\beta = .01, p < .01$ ), indicating that international diversification has a positive impact on workplace financial performance. However, in Model 3, to which we added the variables of training in multi-tasking and in-house subcontracting ratios, neither functional nor numerical flexibility were

**TABLE 2**  
**The results of the panel analysis for the fixed-effect model**

	1 ROE	2 ROE	3 ROE	4 ROE
Constant	.82 (.51)	.64 (.40)	2.96 (.80)	3.04 (.83)
Workplace age	.02 (.61)	.02 (.55)	.15** (1.81)	.13* (1.50)
Workplace size	.31* (1.57)	.32* (1.61)	.08 (.17)	.16 (.34)
Market competition	.06 (.52)	.06 (.56)	-.10 (-.48)	-.12 (-.59)
Unionization	-.11 (-.23)	-.16 (-.32)	-.07 (-.06)	-.13 (-.10)
R&D intensity	-.00 (-.02)	-.00 (-.02)	.18 (1.01)	.17 (.99)
Capital intensity	-.54*** (-3.32)	-.53*** (-3.31)	-1.17*** (-3.18)	-1.10*** (-3.02)
FSTS		.01*** (2.46)	.00 (.32)	.01 (.48)
Training in multi-tasking			.02 (.19)	.01 (.05)
In-house subcontracting ratio			-.01 (-.39)	-.00 (-.17)
FSTS * Training in multi-tasking				.01** (1.88)
FSTS * In-house subcontracting ratio			-.00*	(-1.43)
<i>R</i> <sup>2</sup>	.01	.02	.06	.08
F-test	17.92***	17.99***	1.47***	1.50***
$\Delta$ F		6.07***	.13	2.73**
Number of observations	3,114	3,114	901	901
Number of groups	1,647	1,647	685	685

Note: t-statistics are provided in parentheses. Significance is indicated at the .01\*\*\*level, the .05\*\*level, and the .10\* level (one-tailed).

Coefficient is non-standardized  $\beta$ . Standard errors are in parentheses.

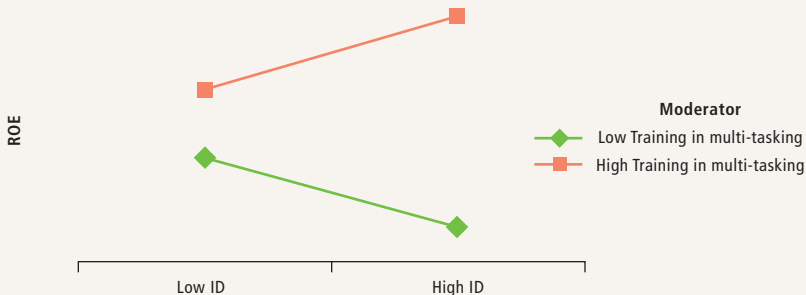
significantly related to workplace financial performance, suggesting that there is no direct impact of labour flexibility on financial performance.

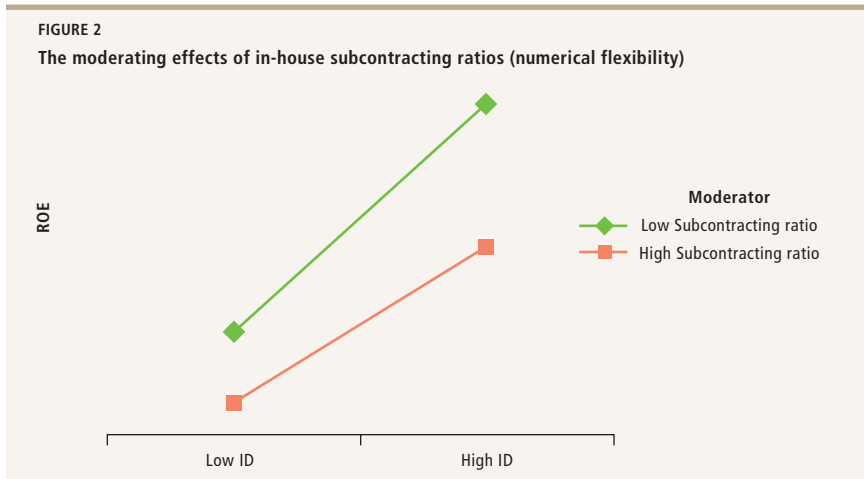
To test the moderation effect of labour flexibility, two types of labour flexibility were simultaneously added to Model 4 in Table 2 along with their interactional terms with international diversification. The model shows a good fit to the data: the R-squared value of the model is .08, and the result of the *F* test is also highly significant at the .001 level. This result confirms that both types of labour flexibility have moderating effects on the IDP relationship, yet they do so in opposite ways. First, in terms of the interaction effect of functional flexibility, the regression coefficient of the interaction term (FSTS × training in multi-tasking) in Model 4 is significant and positive ( $\beta = .009, p < .05$ ). With the interaction term added, we also can see an increase in the  $R^2$  (.08) of Model 4 compared to that of Model 3 (.06). As for numerical flexibility, as shown in the same column of Table 2, the cross-product term of FSTS and the in-house subcontracting ratio (FSTS × in-house subcontracting ratio) is significant, while the sign of the cross-product term is negative, as anticipated in Hypothesis 2 ( $\beta = -.001, p < .10$ ), with a slight increase in  $R^2$  (.08) compared to Model 2 ( $\Delta = .02$ ).

Figure 1 displays the nature of the interaction effect. The graph for workplaces with high training in multi-tasking is steeper than that for workplaces with low training in multi-tasking, which indicates that training in multi-tasking strengthens the positive impact of international diversification on financial performance. Figure 2 depicts the moderating role of numerical flexibility, which implies that the beneficial impact of international diversification on financial performance is weaker at workplaces with greater in-house subcontracting ratios than others. Thus, these findings support both Hypotheses 1 and 2 regarding the contrasting moderating effect of functional and numerical flexibility on the IDP relationship. Overall, this result indicates that the impact of functional flexibility on the IDP relationship is more beneficial than that of numerical flexibility.

FIGURE 1

The moderating effects of training in multi-tasking (functional flexibility)





## Discussion

This paper sought to explore the interplay between international diversification, labour flexibility, and workplace-level performance using a large-scale panel survey of Korean workplaces. Our finding affirms that functional flexibility achieved through progressive HRM practices (e.g., training for job rotation) reinforces the positive impact of international diversification on workplace performance. In contrast, we found that in-house subcontracting work arrangements (a proxy of numerical flexibility) do not have the same beneficial effect. Rather, they lessen the positive impact of international diversification on financial performance. These findings imply that the impact of labour flexibility is not homogeneous and varies based on specific types of employment arrangements that embody labour flexibility.

Our study contributes to the industrial relations and international business literature in three ways. First, by illuminating workplace-level factors that moderate the IDP relationship, our study adds insights to the literature on this issue, which has primarily focused on firm-level, strategic factors. We argue that the shift of attention towards workplace-level practices is particularly pertinent in the context of internationalization, which accompanies the transformation of job and work designs (Giles, 2000; Ham and Kleiner, 2007; Thelen and Wijnbergen, 2003). Second, our study provides a more comprehensive and contextualized understanding of labour flexibility by comparing the implications of two distinct types of flexibility for the IDP relationship. Our study reveals that when workplaces invest in training for job enlargement and employee involvement programs that lead to the enhancement of functional flexibility, the link between international diversification and performance can be strengthened. This finding also resonates with the assertion in the international business literature that, in the ever-globalized business world,

investment in human capital is a better strategy for improving financial performance in the long run (e.g., Carpenter *et al.*, 2001). Finally, the study of labour flexibility in the context of advanced emerging economies offers valuable implications for industrial relations scholarship. Many past studies have attempted to shed light on the important role of labour flexibility by studying firms in developed countries. Consequently, labour flexibility in emerging market economies, marked by small, open economy structures, government-directed international expansion and conflict-laden labour relations, is relatively understudied. According to our results, functional and numerical flexibility play important but contrasting roles in shaping the impact of international diversification in this advanced emerging market. We therefore believe that our findings complement insights from previous studies of Western developed economies, enriching current theories on labour flexibility.

From a practical standpoint, our findings suggest that maintaining a numerically stable core group of employees who retain firm-specific skill configurations can confer special benefits that competitors cannot easily replicate. In other words, permanent and stable employment arrangements play a more crucial role in the process of international diversification, whereas excessive dependence on employment externalization for cost reduction is likely to offset the benefit that international diversification may bring about. In summary, managers must not lose sight of the potential benefit of investment in human capital in the context of international diversification and must avoid being blinded by short-term employment externalization strategies.

Some limitations of this study deserve elaboration and point to future research possibilities. First, the data come from one country and might not be generalizable to other countries. Nonetheless, the findings of this study do represent important theoretical insights into international diversification in the context of advanced emerging markets, and future research can build on them by conducting comparative studies on internationally diversified workplaces in different types of economies. Another limitation of this research is that a single measure of each type of labour flexibility was used. Given the myriad ways to implement labour flexibility in the workplace, future research could include other types of HPWPs or non-standard work arrangements to explore various aspects of functional and numerical flexibility. Thus, future research could explore other forms of numerical flexibility such as fixed-term and dispatched employment arrangements. Similarly, financial performance was measured by ROE, which represents stockholders' investment return. However, organizational performance includes various non-financial factors. In this light, future research could benefit from measures of workplace-level performance incorporating multiple perspectives from various stakeholders. Future research could thus provide a more comprehensive investigation of performance related to individual employees or labour unions.



## Notes

1. Emerging market countries with higher developmental statuses have been further categorized into advanced emerging market countries (see the Morgan Stanley Capital Index-MSCI, and the Financial Times Stock Exchange-FTSE). Examples include Taiwan, South Korea, Turkey, Brazil, Poland, Mexico, and Malaysia. Referring to Tsai's (2014) distinction between advanced emerging countries and emerging countries in his study of the Taiwanese case, the present study classifies South Korea as an advanced emerging market country.

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## SUMMARY

### Maximizing the Benefits of Internationalization: The Moderating Role of Labour Flexibility

Using the large-scale *Korean Workplace Panel Survey*, this study examines the interplay between international diversification, labour flexibility, and workplace-level performance in the context of advanced emerging markets. Filling the gap in the literature on the international diversification-performance (IDP) relationship, which focuses primarily on firm-level characteristics and overlooks the role of labour factors as contingent variables, we draw attention to the workplace level dynamics by exploring how the two types of labour flexibility—functional and numerical flexibility—moderate the impact of international diversification on performance. The results show that when workplaces invest in training for job enlargement and employee involvement programs that lead to the enhancement of functional flexibility, the link between international diversification and performance can be strengthened.

This finding supports the assertion in the international HRM literature that, in the ever-globalized business environment, investment in human capital is a better strategy for improving financial performance in the long run. Furthermore, we find that numerical flexibility, as measured by in-house subcontracting arrangements, has a negative impact on the IDP relationship. Overall, our study suggests that the quality of human resources and a well-designed workplace configuration may still help improve performance in the context of international diversification, whereas excessive dependence on employment externalization for cost reduction is likely to hurt not only financial performance but also long-term sustainability. We also believe that our findings on the advanced emerging market economy complement insights from previous studies, which are largely based on Western developed economies, thus enriching current theories on labour flexibility.

KEYWORDS: international diversification, functional flexibility, numerical flexibility, workplace performance.

## RÉSUMÉ

### Accroître les bénéfices de l'internationalisation : le rôle modérateur de la flexibilité du travail

En s'appuyant sur une enquête à grande échelle, le « Panel d'enquête coréen sur les milieux de travail » (*Korean Workplace Panel Survey*), la présente étude examine l'interaction entre diversification internationale, flexibilité du travail et rendement au travail en contexte de marchés avancés émergents. Afin de combler les écarts dans la littérature sur la relation entre rendement et diversification internationale — laquelle met principalement l'accent sur les caractéristiques de l'entreprise et néglige le rôle des facteurs liés au travail comme variables condi-

tionnelles —, nous attirons l'attention sur les dynamiques en cours au niveau du milieu de travail en explorant comment les deux types de flexibilité du travail, soit la flexibilité fonctionnelle et la flexibilité numérique, atténuent l'effet de la diversification internationale sur le rendement. Les résultats montrent que lorsque, dans les milieux de travail, on investit dans des programmes de formation en vue de l'élargissement des tâches et la participation des salariés afin d'accroître la flexibilité fonctionnelle, le lien entre diversification internationale et rendement devrait se renforcer.

Ces résultats appuient l'assertion de la littérature internationale sur la gestion des ressources humaines à l'effet que, dans un environnement commercial sans cesse globalisé, l'investissement en capital humain constitue une meilleure stratégie pour améliorer la performance financière à long terme. De plus, nous constatons que la flexibilité numérique, telle que déterminée dans les ententes de sous-traitance internes, a une influence négative sur la relation entre rendement et diversification internationale. Globalement, notre étude suggère que la qualité des ressources humaines et une configuration bien conçue du milieu de travail peuvent aider à améliorer la performance dans un environnement de diversification internationale, tandis qu'une dépendance excessive à l'égard de l'externalisation de l'emploi dans le but de réduire les coûts est susceptible de plomber non seulement la performance financière, mais aussi le développement à long terme. Nous pensons également que nos résultats relatifs à une économie de marché émergente avancée ajoutent aux observations rapportées dans d'autres études qui portaient principalement sur les économies occidentales avancées, constituent un enrichissement des théories actuelles sur la flexibilité du travail.

MOTS-CLÉS : diversification internationale, flexibilité fonctionnelle, flexibilité numérique, rendement au travail.

## RESUMEN

### Maximizar los beneficios de internacionalización: El rol moderador de la flexibilidad laboral

Utilizando una encuesta de gran escala, la *Korean Workplace Panel Survey*, este estudio examina la interacción entre la diversificación internacional, la flexibilidad laboral y el rendimiento en el lugar de trabajo en el contexto de mercados emergentes en avance. Cubriendo el vacío dejado en la literatura respecto a la relación entre rendimiento y diversificación internacional (RDI) que focaliza principalmente las características a nivel de la firma y subestima el rol de los factores laborales como variables contingentes, nosotros llamamos la atención sobre las dinámicas del lugar de trabajo explorando cómo dos tipos de flexibilidad — flexibilidad funcional y numérica — moderan el impacto de la diversificación internacional sobre el rendimiento. Los resultados muestran que cuando los lugares de trabajo invierten en la formación para ampliar las funciones del empleo y en programas de

implicación de los empleados que conducen a ampliar la flexibilidad funcional, el vínculo entre diversificación internacional y rendimiento puede ser reforzado.

Este resultado apoya la afirmación proveniente de la literatura internacional en gestión de recursos humanos, que en el contexto de negocio cada vez más globalizado, la inversión en el capital humano es una mejor estrategia para mejorar el rendimiento financiero a largo plazo. Es más, encontramos que la flexibilidad numérica, como medida por los arreglos de subcontratación interna, tiene un impacto negativo sobre la relación entre el rendimiento y la diversificación internacional. En su conjunto, nuestro estudio sugiere que la calidad de recursos humanos y una configuración bien diseñada del lugar de trabajo pueden ayudar a mejorar el rendimiento en el contexto de diversificación, mientras que la excesiva dependencia de la externalización del empleo con miras a la reducción de costo es probable que perjudiquen no solo el rendimiento financiero sino también la perdurabilidad a largo plazo. Creemos también que nuestros resultados sobre la economía avanzada de mercados emergentes complementan los conclusiones de estudios previos, ampliamente basados en las economías desarrolladas del Oeste, y enriquecen las actuales teorías sobre la flexibilidad laboral.

**PALABRAS CLAVES:** diversificación internacional, flexibilidad funcional, flexibilidad numérica, rendimiento del lugar de trabajo.