

# Does good human resource management reduce the cost of financing?

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**Keywords:** Strategic HRM, employee relation, economics of HRM, ROI, corporate bond,  
financing cost

**Preferred Stream:** Identities and Employee Relations

# 1. Theoretical Framework

## 1.1. SHRM-RBV Brief and Potential Flaws

The field of strategic human resource management (SHRM) has long focused on the relationship between HRM practices and organisational performance. Extensive research seeks to understand how HRM practices contribute to firm performance and the underlying theoretical frameworks that support this relationship (Guest et al., 2013; Huselid, 1995). The RBV concept that suggests that human resources (HR) can develop into a source of sustainable competitive advantages and contributes to organisation success (Barney, 1991; Barney & Wright, 1998; Wright et al., 2001) is a central theory in the SHRM field, providing a theoretical foundation to examine the role of HR in firm performance (Allen & Wright, 2007; Kaufman, 2015b).

However, there is increasing criticism of the HRM–performance linkage, particularly, RBV as the underlying theoretical mechanism, which cannot be directly tested (Boselie et al., 2005; Kaufman, 2010) nor accurately incorporated into strategic HRM studies (Kaufman, 2015a, 2015b, 2015c). Kaufman (2010, 2015b) asserts that a great deal of value remains for development when examining the RBV through the lens of economic theory.

## 1.2. Return on Investment (ROI) in HRM

Alternatively, Kaufman (2015b) proposes an economic model that focuses on the cost-based ROI of HRM and considers the variables that are principal components of HRM's contribution to revenue and cost (Equation 1). Differ from RBV, the economic approach replaces the competitive advantages with the ROI as the dependent variable of SHRM and considers HRM an input factor that contributes to ROI/profitability through leveraging firms' production Q (Kaufman, 2015b; Kaufman & Miller, 2011). The value generation path of the economic HRM model can be expressed as Pathway A in Figure 1.

Equation 1 Economic Model of HRM - ROI Function

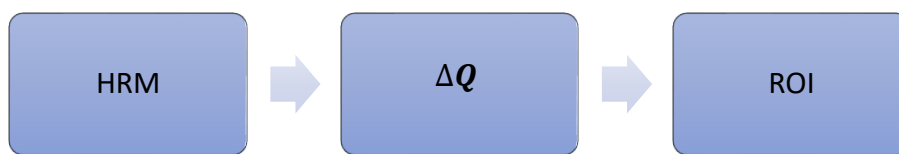
$$ROI = f(MRP_{HRM}, Z_{HRM}, X)^1$$

where Marginal Revenue Product (MRP):  $MRP_{HRM} = \Delta Q (\text{Production}) \times \text{Price}$

and  $Q = f(K, L, HRM)$

Figure 1 Value Generation Pathways of HRM Investment

Pathway A:



Pathway B:



This figure shows the value generation pathways for the economic HRM model (Pathway A) and our proposed new pathway of Financing Cost Reduction resulting from HRM (Pathway B).

### 1.3. ROI in HRM – Financing Cost Reduction

In this paper, we follow the economic HRM framework but diverge from it by proposing a new value generation route in addition to the production pathway (Pathway A in Figure 1). We argue that a firm's HRM practices not only increase the production level, but it also has an impact on a company's financing cost, which in turn affects the ROI/profitability, see Pathway B in

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<sup>1</sup> where  $MRP_{HRM}$  is the marginal revenue products from extra HRM practices and can be expressed as  $\Delta Q \times \text{Price}$ ,  $\Delta Q$  is extra output created by HRM. A firm's production function can be expressed as  $Q = f(K, L, HRM)$ , with factor inputs of physical capital ( $K$ ), labour ( $L$ ) and HRM.

$Z_{HRM}$  is the cost associated with the investment in extra HRM practice;  $X$  is a vector of contingent and contextual factors which moderate the HRM and performance relation (Kaufman, 2015b; Kaufman & Miller, 2011).

Figure 1. We propose a new input factor – *Financing Cost Reduction* resulting from HRM practices – which should be incorporated into the economic HRM function in addition to existing factors (see Equation 2). This proposition is based on the finance literature that reveals the effect of HRM on reducing corporate financing costs involved in debt issuance (Francis et al., 2019; Qian et al., 2021). The proposed factor input is especially testable.

*Equation 2 ROI Function with Financing Cost Reduction*

$$ROI = f(\mathbf{Financing\ Cost\ Reduction}_{HRM}, MRP_{HRM}, Z_{HRM}, X)$$

## 2. Two-stage ROI Estimation

To empirically test the *Financing Cost Reduction*<sub>HRM</sub>, we proposed two steps to estimate the ROI in HRM through the financing cost reduction, following the ROI function in Equation 3 (Newbert, 2014).

*Equation 3 ROI through Financing Cost Reduction*

$$ROI = \frac{\Delta \text{Return of HRM investment}}{\Delta \text{Cost of HRM investment}}$$

**First**, we estimate the marginal financing cost reduction result from additional HRM investment (i.e.,  $\Delta \text{Return of HRM investment}$ ) by performing difference-in-differences (DiD) analyses. We use the bond issuance spreads of Chinese firms from the WIND database as the dependent variable, which proxy a firm's cost of financing. We use the firm-level Labour Management (LM) rating from MSCI ESG Stats to proxy a firm's investment and engagement in employee relations management and use it as a primary independent variable to explain the bond financing cost.

Utilising the COVID-19 lockdown in China as an exogenous shock to the HRM–financing cost relationship, we apply Shock-based DiD-Continuous Design (Atanasov & Black, 2016) to get the marginal financing cost difference between high- and low-LM firms after and prior the shock, see Equation 4.

**Second**, we compute the associated HRM cost for a company in a marginal form (i.e.,  $\Delta \text{Cost of HRM investment}$ ) using employee wages<sup>2</sup> and employee number data. The ROI in HRM through *Financing Cost Reduction*<sub>HRM</sub> is then calculated by dividing the marginal return of HRM investment (from the first step) by the associated marginal cost (from the second step).

#### *Equation 4 DiD Model Specification*

*Issuance spread*<sub>*i,j,t*</sub>

$$\begin{aligned}
&= \beta_0 + \beta_1 \text{High\_LM\_Score}_i + \beta_2 \text{Post\_Event}_t^k + \beta_3 \text{High\_LM\_Score\_Post\_Event}_t^k \\
&+ \beta_4 \text{Maturity}_i + \beta_5 \text{Credit Rating}_i + \beta_6 \text{Coupon Rate}_i + \beta_7 \text{Issue Size}_i \\
&+ \beta_8 \text{ROA}_{i,t} + \beta_9 \text{Leverage}_{i,t} + \beta_{10} \text{MTB}_{i,t} + \beta_{11} \text{MV}_{i,t} + \beta_{12} \text{Cash Holdings}_{i,t} \\
&+ \beta_{13} \text{Investment}_{i,t} + \beta_{14} \text{Interest Coverage}_{i,t} + \beta_{15} \text{CDB } 10Y_t \\
&+ \beta_{16} \text{Term Spread}_t + \beta_{17} \text{GC001\_SHIBOR}_t + \beta_{18} \text{SSE Return}_t \\
&+ \beta_{19} \text{Sub} - \text{Industry FE}_i + \varepsilon_{i,j,t}
\end{aligned}$$

### 3. Findings and Contributions

Based on a sample of 172 non-financial Chinese companies and their bond issuance over a two-year balanced period (January 2019 to December 2020) around the COVID-19 shock, we find that firms with superior employee relations management are associated with *18.79 basis* points lower bond issuance yields after controlling for the firm-, bond- and market-level factors. This reduction in issuance spread is equivalent to an annual saving of nearly RMB 15.25 million (or 2.39 million dollars) per company. After estimating the cost associated with superior HRM practices, we find that the cost-based ROI in HRM through financing cost reduction is about 1.24% annually.

Our study has three important implications. First, we made a theoretical contribution by proposing a new input factor, Financing Cost Reduction, which should be included in the economic function of HRM. We empirically tested the proposed input factor by suggesting a two-stage estimation method. Second, consistent with the human capital frameworks, we show that superior employee relations are negatively associated with firms' financing costs. Third, the study bridges HRM with finance and economics and highlights the second-order effect of investment in human resources.

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<sup>2</sup> Employee wages include bonuses, benefits, welfare, and performance incentives.

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