

# Simplex of HR: Talent Management With Simplex Methodology

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This study searches for use of simplex theory in talent management. It is a research topic belonging to this study. Human resource management (HRM) can be described with performance focus and talent management. This study presents a new perspective in talent management. Firstly, Talent management may be described with fulfilling organizational positions by best talents, because talents further performance of departments and performance of firm. Firm has departments, such as production department, marketing departments, finance department, and etc.. This study suggests simplex method for talent management for practitioners. It identifies research question and has two propositions that simplex may be used in talent management. Secondly, study depicts linear of American HRM. It is based on a relationship among human resource (HR) systems, various HRM practices, and organizational performance. Linear proposition of study is that, HRM practices as a system have an impact on firm performance (goal function).

*Keywords:* talent management, simplex methodology, linear programming, human resource management (HRM)

## Introduction

Main problem of study is applying talent management in organizations. Description of talent management is provided in literature review. Contemporary human resource management (HRM) may be defined with performance and talent management perspectives. Talents have an impact on firm performance through individual performance. It assumes that talents have expected individual performance in organizations, which is main purpose of contemporary HRM. So, talents increase business department's performance and performance of business departments increases organizational performance. So, it is expected that, talents have an impact on firm performance through individual performance.

This study aims to use simplex method in talent management in management of human resource (HR). What is HRM? This is major question worldwide by HR practitioners. HRM has maybe three matters. Firstly, HRM is to apply practices in organizations. Secondly, HRM is to increase individual performance. Therefore, firms apply HRM practices to increase individual performance. Thirdly, HRM is the "talent management". Therefore, this study aims to study talent management with simplex method.

## Literature Review: Theory of Talent and Simplex

### What is Simplex?

Simplex method is management of opposite (or contrasts). Simplex method aims to find optimal solution for decision makers between opposites. This study aims to find best talent for firms by using simplex method.

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### Theory of HRM

Well known description of strategic human resource management (SHRM) is HRM-firm performance relationship (Wright & McMahan, 1992). SHRM theory of this study is based on this definition, and theory of SHRM discusses moderators between HRM and firm performance. This theory replies the question of how HRM increases firm performance. According to theory, HRM practices improve individual performance of employees. Individual performance has an effect on performance of business departments, because employees work for a business department in organizations. It seems that performance of departments has an impact on firm performance. Moderators between HRM and firm performance are individual performance and business departments. Accordingly, HRM has an impact on individual performance; on performance of business departments; and on firm performance. Therefore, the higher the individual performance is, the higher the firm performance will be. So, Figure 1 of this description above might be drawn: This depicts describe definition of SHRM above by Wright and McMahan (1992).

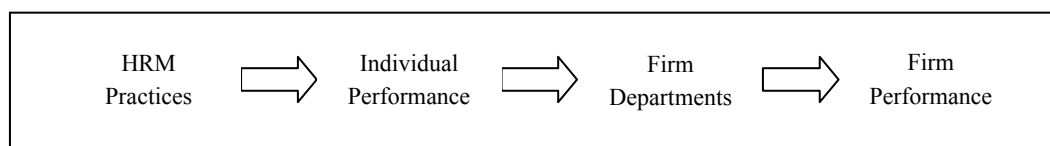


Figure 1. Theoretical perspective of human resource management.

### Definition of Talent Management

There are several business functions in management. They are supply, stock, finance, accounting, marketing, production, logistics, and others. Those functions make up firm departments in organization and it makes up job divisions in organizational charts. From the overlook of talent management, talents work for in those departments in firm.

Therefore, talent management is related with strategic HRM, because SHRM is defined by HRM-firm performance link. Talents have an impact on performance of business department through individual performance. Because it is expected that talent has individual performance, and this individual performance has an impact on firm performance through firm departments. So, HRM are to figure out and find out talents from internal or external staffing sources for firm performance. If performance of business departments is higher, firm performance increases. Therefore, talent management is related to SHRM.

HR finds and appoints talents to managerial positions. For instance, HR finds production managers, stock managers, marketing managers, and others. This is talent management. Those managers carry firms and departments to possess higher firm performance. Therefore, HR and talent management are related with SHRM, because talents and performance of departments increase total performance of firm. Therefore, talents have an impact on firm performance through individual performance. Therefore, talent management is related to strategic HRM. Because HR figures out talents for firms and those managers who manage the firm for higher performance.

Proposition 1: Firms may use simplex methodology in HRM.

It describes decision alternatives in HR, limits, and goals in HRM. Limits in talent management are performance notes, which is over 60 in this study to become candidate for management positions.

### Research Methods

Research method of study is covered by simplex theory. Simplex is developed after World War Two (Kobu, 1987). In addition, Markowitz (1952) employed simplex methodology in his study of “portfolio

selection” in 1952. Simplex is based on two factors: linear programming of goal function and matrix structure.

### Analysis: Simplex Methodology and Talent Management

Simplex is management of opposite in management of firm. There are two opposites in staffing practices:  $X1$  and  $X2$ .  $X1$  represents internal sources for recruitment process and  $X2$  represents external sources for recruitment.  $X1$  and  $X2$  are opposite forces. A firm hires new employees either from internal source or from external source, for example, suppose finance manager leaves the firm, how would HR handle this matter? Firm cannot run without finance manager. Therefore, HR needs to fill out finance position by best candidate (or by best talent). How does HR find talent? This study suggests simplex method.

In addition, top management may determine in firms who will be the next manager? In this case, HRM plays advisory roles for upper management and they may influence decision of upper management in appointment. So, HR becomes strategic partner of top management by influencing employment decisions.

Simplex is continuing of linear programming. Linear is developed (Kobu, 1987), and it is applied in economy management. Researchers improved linear programming and developed simplex methodology for practitioners.

There is a linear relation between dependent and independent variable in linear equation. Also there are limits. In linear, limitations do not join problem solving. However, limits join program in simplex method. Decision makers consider limits in simplex’s problem solving method. It is different between simplex and linear.

In this case, simplex objective function is similar to linear programming. It is to choose best candidate for firms. Limits are related with performance appraisal reports. Simplex consider opposite alternatives to make management decisions. Opposites are internal source and external sources in this problem. So,

$$Y = 9X1 + 7X2$$

$$9X1 + 7X2 \geq 60$$

$$7X2 + 3X1 \geq 60$$

$$X1, X2 \geq 0$$

$Y$  represents objective function in simplex;  $X1$  means internal source; and  $X2$  means external sources. Equations represent limitations in problem. As noted, performance grades of employees must be higher than 60 in problems to become candidate.

So, simplex table (Table 1) is established as follows.

Table 1

*Simplex Table*

Objective line:	9	7	Slack variable 1	Slack variable 2	
$X1$	9	7	0	0	60
$X2$	7	3	0	0	60
indexes	(-9)	(-7)	0	0	?

Decision maker achieves optimum end, when all variables become positive in below line. “?” is the optimum end.

### Analysis Continue: Linear Programming and HRM

American HRM has a universalistic perspective. It describes linear (direct) relationship between HRM and firm performance. Accordingly, it assumes that, there aren’t moderators between HRM and performance. So,

HRM has an impact on firm performance through employee performance. Therefore, this part of paper explores linear of American's HRM (Figure 2).

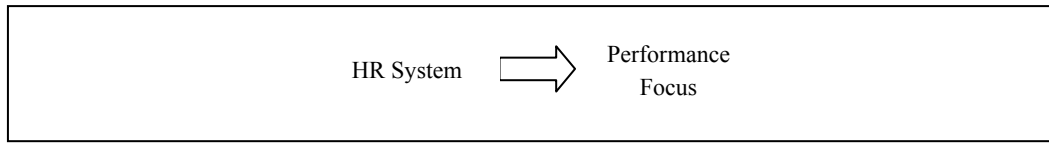


Figure 2. Linear of American HRM.

In this system, HRM has a direct impact on firm performance through impact of HR system on performance, because American scholars believe that HR system has an impact on individual performance.

In addition, American style HRM has a configurational perspective. It considers systems of HR in HRM. Asian HRM might have contingency perspective which explores moderators among HRM-performance link. European HRM maybe has contextual perspective which searches of impact of institutions on HRM.

So, formula of linears might be as follows.

There is an objective function in linear goal programming. Goal of HRM in linear is to achieve firm performance. HRM practices have an impact on firm performance as an independent variable in this function:

$$Y = aX_1 + bX_2 + cX_3 + zX_y$$

$Y$  represents objective of HRM (which is firm performance);  $a$  is coefficient of staffing practices;  $b$  is coefficient of training practices;  $c$  is coefficient of performance appraisal;  $z$  is coefficients of other HRM practices that applied in firm;  $X_1$  is staffing;  $X_2$  is training;  $X_3$  is performance appraisal; and  $X_y$  is others.

Through this linear formula, HRM practices and HR systems have an impact on objective of firm performance. That represents direct relation between HRM and firm performance in HR system.

Coefficients are crucial for linear relations, because it represents impact of each HRM practice on performance. Therefore, HR managers are responsible for thoroughly decide coefficients of HRM practices. In USA, coefficient of staffing might be higher than other markets; but in Europe it is maybe higher of training practices. Training-staffing might be crucial to Chinese or Asian HRM, therefore, coefficient of those practices are higher than other HR practices in this market.

Therefore, HR is responsible for determining coefficients of HR to figure out the impact of HRM practices on firm performance.

Proposition 2: Linear relations of American HRM assume impact of HR systems on performance.

## Conclusions

In conclusions, HRM may currently be defined with talent management. In earlier decades, it is presumed as HR system, firm performance, and HRM practices.

HR is the advisor of line managers to fulfill empty positions in hierarchy. So, HR is to help department managers or upper management to appoint new talents to management positions. That might be a new perspective in talent management. So, HRM department may become strategic partner of company by this advisory role for line managers.

HR may become members of board of directors and they may influence employment decisions of up management, such as in promotion or recruitment. This policy might be aligned with talent management. So, HR may become strategic partner of company by influencing employment decisions in board of directors.

To conclude, major research result of study is that firms use simplex methodology in HR decisions. Index line should be positive to appoint best candidate for organizational positions for managers, supervisors, executives, CEOs, and line managers' positions. Firms may take advantage of internal or external source for talent management. Promotion or succession planning or career planning may be priority to HR's internal source and staffing might be important practice for external source.

Proposition 3: HR may become strategic partner of firm by becoming board member and by influencing employment decisions.

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