

# Information Technology Effects on Strategic Human Resource and Performances

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**Abstract**—This article reviews previous frameworks and reveals initial definition from several empirical works on strategic human resource management (SHRM). Organizations find out that it is necessary to use empirical strategies and adopt various approaches in using valuable recent information to achieve high quality performances. Also, using different stage of information technology will decline the transparency in HR departments and improve the HR services in the firms. In conclusion, this study reveals the SHRM performances in the firms and how information technology can influence the effects of SHRM on organizational performances. There is a need to know the results of the moderating role of information to know whether it can decrease or increase the remarkable strategic human resource management influences on firms' performances. The aim of this study is to evaluate the changes in connection between SHRM and HR performances (profitability, productivity, service/product quality) with the moderating role of the information technology.

**Keywords**— Information Technology, Organizational Performances, Productivity, Strategic Human Resource Management

## I. INTRODUCTION

**H**UMAN Resource practices and performances are significantly important to the firms' competitive advantages in the knowledge-based economy which is changing rapidly. There is a different kind of literatures which are indicated the linkage of HR practices and financial performances, flexibility, and productivity as organizational outcomes. Also, the HR practices adoption and its organizational outcomes are already present in different studies [1,2]. Clearly, literatures shows that the capabilities, internal activities, and resources as a competitive advantage sources are acknowledged by theories of strategic management [3]. In addition, a major intention of this research study is therefore to raise awareness of the organizational performances by the use of notable strategic human resource management. Surprisingly, there are a few studies which consider and test the role of moderator and mediation variables. I viewed information technology as a construct to that intervenes between strategic human resource management and HR performance control for its moderator.

This study is organized as follows: First, the literature is

reviewed the current definition and framework of strategic human resources management. Second the study proposes a framework to define SHRM and information technology effects more comprehensive. Eventually, the study opens a discussion to conclude the consequences of proper SHRM with the information technology's role.

## II. BACKGROUND OF STUDY

This study defines the effects of strategic human resource management (SHRM) on various levels of organization. The resource-base view helps the authors to examine human capital influences on organizational performances. In addition, the role of capital intensity and contextual factor is explored in the model. As a result, the significant reduction of employee turnover and increases in assessments of market performances is indicated. Moreover, return on equity and HRM productivity are moderated by capital intensity [4].

The study in 2001 is explained about various organizational fields' analysis and tried to evaluate the relationship between market orientation, organizational performance, and strategic human resource management (SHRM). Clearly, all concepts are premised organizational culture management. The finding of this research indicates that there is a significant direct relationship between the performance and market orientation and the market orientation is a mediator in a SHRM and organizational performance relationship [5].

Later in 2007, the paper with innovative research methodology had conducted to explore the connection between supposed organizational performances and human resource management as an important source for creating firms' competitive advantages in the both private and public European Union. Three HRM models become known, while there is no significant different in these two sectors. Some practices such as training and development have strong correlation with performances in these three models, while communication is only related to two models. The findings indicate the valuable influences of the new innovative techniques in the research with traditional methodology. Hence, universal connection between superior business performance and superior HRM is defined [6].

The vertical linkage between human resource management and corporate strategy is needed by Strategic human resource management. The focus of most models is on the horizontal and vertical linkages. This study uses three different person-environment categories to create linkages (both vertical and horizontal). According to strategic conceptual framework the relation of person-environment and organizational relation are

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supported by corporate strategy. Moreover, the implications are discussed strategic human resource management approaches [7].

There is another article which shows the strategic human resource management impacts (SHRM). In the following, the theoretical foundations of SHRM are extended as well as integration and review [8].

In another study which has been conducted in 2009, the effects of two important perspectives (chronological and evolutionary) on the strategic human resource management (SHRM) are reviewed. There are seven different themes that illustrate the trends and directions of thirty years of various researches. In this paper, the developed conceptual framework has considerable influence on management disciplines and HR activities [9]. According to previous related human resource management and strategy researches, the connection between human resource management, the firm's strategy and performances are explored. Firstly, the human resource role in creating firms' competitive advantages is exemplified based on the relevant literature review. In this study, multi-level model show the effects of human resource management on the organizational and individual factors on an organization's strategy [3].

### III. STRATEGIC HUMAN RESOURCE MANAGEMENT

Human capital refers to the full range of knowledge, skills, and abilities to produce a valuable outcome. At the upper rank of the organization, human capital is usually deployed to scan the process information, solve problems or recognize and seize opportunities, and the like [10]. Human resource management is also a strategic and comprehensive function of business which enables employees to contribute effectively and productively to overall company benefit and the accomplishment of the organization's goals and objectives [11]. Strategic human resource management era and also behavioral perspective's study were defined in a decade ago. The behavioral perspective's advocates have districted that different behaviors need different kind of strategy. Hence, different practices of human resource management need different behaviors. The linkage of strategy and human resource management are imperative important for several reasons. The reason of management linkage to strategy is explained and helps researchers to understand the role of traditional theories like the behavioral perspective in the new strategic posture of the firms [12]. There is a general model which is conceptualized in the connection between HRM strategy, business strategy of environment, and organizational performances. Definitely, firms select the preferred business strategy based on their environment and competencies. The decomposition process happens in the different divisions and functional units while every unit's response to the activities specifically. Functional units found the underlying strategies which enable them to implement and develop the policy [13].

Miles and Snow (1987) cited that firm performance is higher than business strategy when the external environment and firm's strategy are consistent. A firm aligning with the

environment happens in the strategy implementation. A selected strategy should need high skill and less commitment. Also, it should to develop and deploy the firm's human resource. The following steps make the human resource more efficient: 1) according to short-term needs, employees should dismiss and acquire; and 2) matching the requirements of specific tasks to employee skills. High involvement and skill execution are major factors of an accumulator strategy. Personnel with high latent potential and deployment of those potential skills through organization needs are the major attempts to build up a firm's human resource. Lastly, the facilitator strategy creates new knowledge and found a new generation of information. Motivated employee and encouraging them to develop their skills and also their knowledge on their own are important for this strategy. Matching HRM strategy and business strategy are useful to select business strategy.

In terms of organizational performances, SHRM indicates the significance of HR practices for overall firm's performances such as productivity, financial performances, and employee turnover [5]

### IV. STRATEGIC HUMAN RESOURCE AND INFORMATION TECHNOLOGY

The question of whether information technology has effects on organizational performance has been addressed by many studies. Information technology was investigated in this study as a part of a contingency framework. The distinction between automating, information and transforming (AIT) technologies is important to both understanding how IT creates value and estimating IT's impact on performance. Strategic Human resource management and technology have inevitable close correlation, which every side has to change by changing the other side after passing the time. Shortly, technology changing leads to the HR changing, but the HR changing imposes the technology changing in a same way. An organization has resources and strategies which are necessary to achieve the goals, so Human resource management needs related strategies which are necessary to attain HR goals. In the following, these goals (HR goals) define HR activities in details. When these goals are neither obvious nor reasonable to line managers irritation seems to start. The necessities of information technology in HR departments are as below: the information technology accelerates different activities, the information technology is able to manage the complicated HRM activities, and the information technology can evaluate the information whether it is correct or not.

### V. INFORMATION TECHNOLOGY AND STRATEGIC HUMAN RESOURCE PERFORMANCES IN THE RELATED STUDIES.

Because of the enormous expenditures on IT by today's organizations, researchers and practitioners, through investigation, are seeking to better understand the relationship between IT and performance. Studies that have reported this type of research typically show a positive relationship between

IT implementation and organizational performance [14]. Information is a source of power in organizational coordination and cooperation [15]. Previous results indicate that strategic HR practices relate positively to knowledge management capacity, which in turn relate positively to innovation performance. To facilitate the link of strategic HR practices and favorable innovation performance, managers first need to recognize the importance of knowledge management and information process [1]. Implementation of technology increased knowledge, productivity, and staff skills at a government agency. In addition, anecdotal evidence suggests that HR staff can be more efficient at their work with the right automation tools.

According to IT literature review, the impact of information technology includes three stages: transformation, information, automation. In the automation stage, Automation manual systems reduce the need for personnel for doing routine tasks and activities. In the following, it provides more opportunities for every individual to use their full capacity cognitively. For instance, administrative activities like record keeping, personnel reporting are removed and allow professionals to focus more on interpreting information. The comprehensive information is provided by IT and let the human resource to access, analyzes, and evaluates information easily. In the transformational stage, information technology defines new innovative business practices and operations of a company. This stage creates information, knowledge, and creativeness as a top asset for the company.

Overall, IT transformation delivers HR activities to their clients by lead them to create innovative activities. On the information stage, the beneficial and effective information is provided for those who utilize the systems. Hence, the depth transparency to events, activities, and objects is possible by the use of information in the underlying administrative process [16]. Finally, the most complicated and the higher level of strategic human resource management within the upper echelon, the greater the information should be presented. In many instances, technology investments may be related to increases in the firm's productivity, customer satisfaction, product/service quality, and labor loyalty, while making investments in IT itself is not sufficient. Firms must integrate IT into their strategic management process [17].

#### VI. PROPOSED FRAMEWORK

It is known that a high probability of success in the implementation of strategic human resource management is due to Strategic recruitment, motivated employees, Implementation of a performance management information system, and Giving recognition and implementing a fair information system [5]. As it was mentioned former, Human resource management is the management of people who have a strategic importance on the success of the enterprise [10]. In the following, HR roles were reviewed as transitioning from administrative, operational, functionally oriented, and reactive toward more business oriented, proactive, and consultative. In

other words, managers with knowledge-based view believe that knowledge is a strong valuable resource for the organization, While the firms come up with new product or services, actually they need the ability and motivation of the human resource to generate new golden opportunities, create new innovative approaches, and develop the new ideas [18]. In this section, the theoretical framework is proposed which shows the linkage between HRM strategy and HR performance with moderating influences of information technology, as shown in Fig. 1

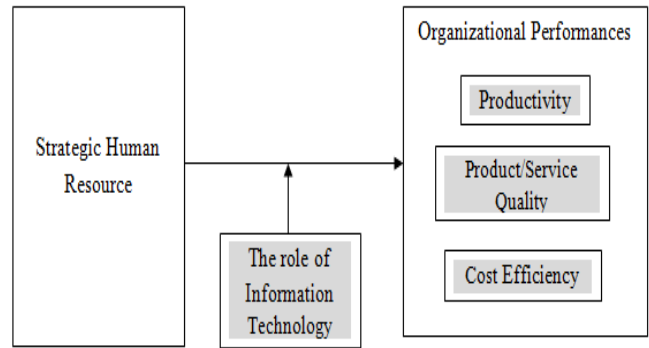


Fig. 1 SHRM and Organizational Performances Configuration

The figure above shows the relationship between SHRM and organizational performances, which moderated by the role of information technology. We try to indicate the increasing and decreasing of these relationships by controlling the mentioned variable.

#### VII. STRATEGIC HUMAN RESOURCE MANAGEMENT AND PRODUCTIVITY

Proposition1: The relationship between SHRM and productivity is changing with moderating of information technology.

Effective SHRM remarkably decrease turnover and in the following the assessment of the overall market performance raise. Employee empowerment, job design, and flexible workforce are affected by building innovative human resource [9]. Direct linkage between technology investment and increases in productivity and performance has been extremely elusive. Anticipated benefits from technology investment include reduced costs, improved quality, increased flexibility, improved customer satisfaction, higher productivity, and, ultimately, higher financial performance [19]. In a study, a different sample of California banks shows that capital intensity (the investment amount in physical assets) is a moderated for SHRM effectiveness. The study in US firms indicates the contract technical HR manager capabilities (training, benefits and compensation, performance measurement, selection, recruitment, and performance measurement) versus strategic HR manager capabilities (all activities which are affecting the individuals' behavior to implement and also formulate the business strategic are named strategic human resource management). The results showed that there is no relation between technical HRM effectiveness

and firm performance. Therefore, HRM effectiveness is strongly related to cash flow, market value, employee productivity [9]. The conclusion of superior research on organizational science showed that the effectiveness of an organization is multidimensional. Hence, every research that explains a single or narrow organizational effectiveness perspective is not willing to evaluate the SHRM research connection. There are four organizational effectiveness dimensions of SHRM research. (I) Employees and workforce behavior as an HR outcomes; (ii) service quality and productivity as an organizational outcomes; (iii) profitability and return on investment as a financial accounting outcome; and (IV) shareholder return and stock value as a capital market outcome [8].

#### VIII. STRATEGIC HUMAN RESOURCE MANAGEMENT AND PRODUCT/ SERVICE QUALITY

Proposition 2: The relationships between SHRM and Product / Service Quality are changing with moderating of information technology.

Firm's strategies should be determined the capabilities and culture of organization for adoption, execution, and creation of the strategic goals of firms. For instance, if the innovation, quality products, and customer responsiveness are the competitive strategy of the company, firms have to develop the structure and process of the strategic implementation more effectively. In fact, within these mentioned system-level human resources, designing and implementation of the HRM practices and policies must link to strategy. In some research, those individual HR activities like selection, training, appraisal, and compensation are linked to financial performance of the firm [20].

#### IX. STRATEGIC HUMAN RESOURCE MANAGEMENT AND COST EFFICIENCY

Proposition 3: The relationship between SHRM and Cost Efficiency are changing with moderating of information technology.

Less efficient companies spend more cost on HR-related problems, while the typical organization spends about \$1,500 annually for per employee. Implementation and development of HR processes and systems can reduce total of those costs which is related to HR. Mostly, managers are being asked about their priorities to spend their talents, resources, and times and how they can cut the cost. For instance, CEO of Continental Airlines (Gordon Bethune) believes on HR-based strategy to cut the cost and reduce its marginal cost to zero. Some cost limitations are common in HR strategies; increasing in accountability tethered the link to strategy. Shortly, HR departments should be customer-oriented, efficient, strategic, and flexible [21]. Due to the important role of SHRM in the Human Resource Planning area, it makes a connection between corporate profitability and HRM practices. There are some empirical studies that emphasize on the HRM effects on the firm profitability, and on HRM activities such as staffing,

selection, compensation. High performance versus low cost is possible by the use of SHRM which examines the firms' effectiveness. Finally, the connection between firm performance, organizational culture, and HRM practices have examined [7]. The structural limits of firms lead to HR deployment to obtain various objectives. Moreover, making the decision to outsource the HR is driven by cost consideration [21].

#### X. DISCUSSION

As mentioned earlier, SHRM (macro organizational approach) is a major plan to deploy human resource and also provide activities map to achieve the goals. Undoubtedly, a recent major issue is the need for an appropriate strategic human resource. Previous study shows that most firm focus on flexible human resource and market orientation as a specific competitive advantage which cannot be duplicated. In addition, the resource must not have any substitutes, if it is a major competitive advantage of the firms [22]. Hence, strategic human resource management can provide an inimitable source of competitive advantage [5]. Moreover, IT can play an important role in creating competitive value if it is deployed in such a way as to leverage firm's performances [23].

Based on the previous quantitative and qualitative data, uses of information technology have effects on HR professionals extensively. Remarkable automation was experienced by HR professionals through a growth establishment and specific application adoption such as training, payroll, and benefits. By use of automated processes, HR has more opportunity to focus on the other imperative tasks and interpreting and solving human resource issues. Time shifting aspects and enabling aspect are two different HR professional aspects. While IT informs and automates activities, less time spend on repetitive and routine activities and more focuses on conceptual and meaningful activities will be occurring. More information responsiveness and more information autonomy will be provided by HR professionals. Organizational performance link SHRM research to HRM, but there is a thin gaps and spots which need more empirical related work to be done on an information technology influences. SHRM effectiveness has positive correlation with organizational performance. The higher SHRM effectiveness leads to higher organizational performance. Definitely, the high-performance firms have more resources to spend for HR strategies. Most of the SHRM activities will be outsourced to external of the firms if the enough resources were not allocated to bottom-line by HR executive. Hence, the important point is the quality or effectiveness of HRM practices not the quantity. The SHRM practices should make sense in terms of the firm's mindset and culture and also the resources should be instituted to practice and policy implementation effectively [4].

Throughout the information process of HR departments, the upper level sets the agendas, conducts the planning, processes the information, and makes the strategic decisions. Higher levels of human Resource also mean that members of the upper level of the department are better able to process

information and make appropriate decisions to receive the high level of performances. In fact, high levels of human resource point out that both individuals or teams preserve to process information more accurate, to match internal capabilities to external opportunities through a various kind of alternatives each of which possess its own profile of strength and weaknesses. Furthermore, poor information-processing and HR department-scanning skills cause of a poor final performance. Thus, higher levels of Strategic Human Resource encourage the inflow of information technology into the firm in the form of much-needed information, which supports the planning and executing of competitive actions in order to achieve the proper performances.

#### XI. CONCLUSION AND FUTURE WORK

This study contributes to the debate about whether IT adds value in any way to performance outcomes. The SHRM field has tended to focus exclusively on information technology as the contingent variable. Consequently, aligning HRM strategies with business strategy subsidiaries creates substantial benefits in terms of higher rate of productivity, lower turnover rates, and lower cost of employee selection, training, communication and most HR managers are likely to emphasize on matching business-HRM strategy.

Future quantitative studies should incorporate the contextual features of qualitative studies so that we can discover what organizational factors besides information technology are important in facilitating a positive relationship between SHRM and performances.

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