

# Applicability of Existing HRM Models in Order to Develop HRIS Model for University

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## ABSTRACT

The understanding of the connection between human resource management (HRM) and organizational performance at the universities is still limited and unexplored issue, despite of the broadly accepted fact that people are the most valued asset of an organization and therefore of an university. Since there are many contributions dealing with HRM process in enterprises and also considering the existing correlations between enterprise and university we defined HRM process at university with reliance on five best known HRM models.

This paper contributes to the issue analyzing HRM process at the University of Zilina in Slovakia and University of Zagreb in Croatia, describing stakeholders involved and then listing important factors that have influence on definition of HRM policies, outcomes and eventually consequences of HRM process. Our intention is to show the relevance of all elements involving in HRM process at university and the necessity of adequate understanding of HRM design in purpose of information and communication technology (ICT) support implementation called human resource information system (HRIS). Using popular HRM models we listed important indicators of HRM implementation that should be measured in order to obtain current state of HRM elements at university.

**Keywords:** information system, human resources, university, HRM model, HRIS.

## 1. Introduction

Two core functions of a university are education and science & research. There are several supporting processes like international relations, quality systems, public relations, social welfare, business and regional support and human resources. University of Zagreb in Croatia and University of Zilina in Slovakia have human resources management (HRM) process that is hardly recognized and not adequately managed and ICT supported. Need for quality human resource management is documented by many authors [1][5] and both considering their contributions and current state at our universities we have perceived necessity for HRM management process improvement. According to [6] it can be achieved by implementing new and available information technologies integrated into one human resource information system (HRIS). Since we still have not found any adequate model of HRIS for university our intention is to develop one. For that goal in this paper we deal with existing HRM models and their applicability in university.

Trying to understand ICT impact on changes in an organization, we have based on MIT90s framework where an organization is represented by five elements [6], all in interaction with each other – its strategies, its organizational structures, individuals and roles, management processes and technologies (Figure 1). In short, strategy is a basic standpoint of top management for the future organisation development. Structure is the arrangement of the organisation units that collaborate and

contribute to serve one common aim. Management processes plan and control the performance or execution of any type of activity in an organisation. Human resources are the individuals who comprise the workforce of an organization. Technology is the usage and knowledge of tools, techniques and crafts and also a set of systems or methods of an organization.

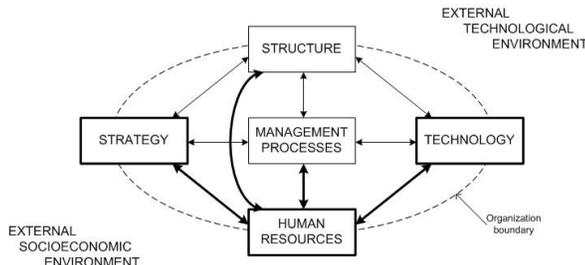


Figure 1: MIT90s framework [6]

MIT90s framework inspired several authors for further research and application in real systems.

One alternative way of looking at the MIT90s framework is shown in Figure 2 whereby technology is at the centre of the five factors illustrated by two competing triangles. According to Wills, putting technology in the middle does not mean that technology is driving the strategic planning but it is integral to achieving change. ICT-based strategic change demands organization's competencies change/development which is situated in the bottom triangle. Hence, while the organization's strategic position in the top triangle should be managed, change requires careful attention to reconfiguring the bottom triangle. An integrated top-down and bottom-up management of IT-based change is necessary, that will involve all five factors and not only technology or strategy [8].

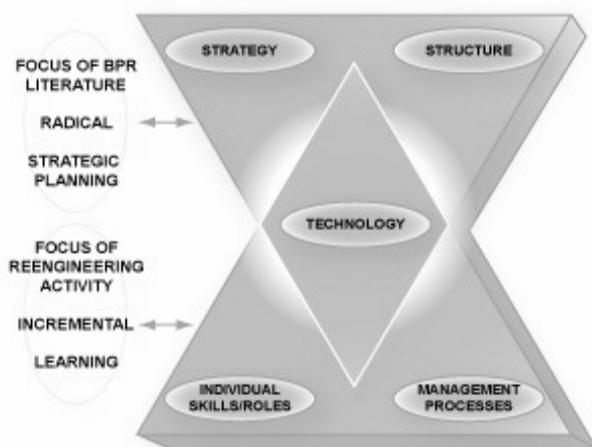


Figure 2: Integrated Top-Down and Bottom-Up Management of ICT-based Change [8]

## 2. HRM models

HRM models are mechanisms to investigate and understand the dynamics of HRM practices in cross-national contexts. HRM incorporates a range of sub-functions and practices that include systems for workforce governance, work organization, staffing and development and reward systems [1]. HRM is concerned with the management of all employment relationships in the firm, incorporating the management of managers as well as non-management labor. It covers a diverse array of styles even with national cultures but the majority of researchers are examining only the traditional “hard” and “soft” models of HRM.

Three levels of factors and variables that are known to influence HRM policies and practices are worth considering for HRM examinations in different national and regional settings [2]. These are:

1. *National factors* (such as national culture, national institutions, business sectors and dynamics business environment)
2. *Contingent variables* (such as age, size, nature, ownership, life cycle stage of organization, presence of trade unions and interests of different stakeholders)
3. *Organizational strategies* (such as the ones proposed by Miles and Snow, 1978 – prospectors, analyzers, defenders and reactors; and Porter, 1985 – competitive strategies based on cost leadership, product differentiation and market focus) and policies (related to primary HR functions, internal labor markets, level of integration and devolvement and nature of work)

Following is the description of five broadly recognized HRM models [2][5] that we have used for our HRM indicators definition.

### 2.1 The matching model (Fomburn et al., 1984)

The matching model is one of the first models, made by the Michigan school, which tightly connects HRM system with organizational strategy [1]. Therefore it focuses on accomplishing strategic objectives of the organization with ultimate aim of increasing competitive advantage, using human resources as any other factor of production [4]. Model consists of four generic processes or functions that are common for all organizations: selection, appraisal, rewards and development. Selection matches available human resources to jobs. Appraisal monitors performance and provides feedback to the organization and its employees. Rewarding system should reward appropriate performance, both short and long-term achievements. Development takes care of developing high quality employees, in knowledge and skills.

Further developments of the matching model were made by Schuler's group where they concluded that the same HRM practices are used differently by organizations that differ in their organizational strategies. And also, organizations are likely to use different HRM practices for a particular level of employees. Further, as organizations change strategies they probably change HRM practices.

## **2.2 The Harvard model (Beer et al., 1984)**

While in the matching model emphasize is put on resource, Harvard model is associated with the human relations, individuals' talents and human willingness to create and work. General managers develop a viewpoint of how they wish to see employees involved in and developed by the organization, and of what HRM policies and practices may achieve those goals [1]. Some strategic vision must be provided from general managers to avoid independent activities, each guided by its own practice tradition. The Harvard school describes two important characteristics of HRM. Firstly, line managers are responsible for ensuring the alignment of competitive strategy and personnel policies. Secondly, personnel set policies that govern how personnel activities are developed and implemented [1]. Model widens the context of HRM in a way that includes the interests of owners and those of employees as well as between various interest groups creating high commitment work system where behavior all of stakeholders is self-regulated rather than controlled by sanctions and pressures [4]. However, communication plays important role in management of such system.

## **2.3 The contextual model (Hendry et al., 1988; Hendry and Pettigrew, 1992)**

This framework is defined by two components, the external environment context (socio-economic, technological, political-legal and competitive) and the internal organizational context (culture, structure, leadership, task technology and business output) [7]. Interconnection and interdependency between these two contexts define content of an organization's HRM.

Martín-Alcázar et al. in [5] comprise all studies about contextual model of HRM where model is integrated in an internal framework defined by a certain organizational climate and culture and also by the firm's size and structure, its productive technology, orientation to innovation and diverse interests of the different stakeholders involved. On the other hand, the external framework is described by variables such as the legislative, governmental, political and institutional context, a certain set of social and economical factors, cultural differences, union influence or the particular conditions of the labor market and the educational and university system. This model puts emphasis on

international dimension of HRM that considers the particularities of each geographic context in which HRM decisions are made.

## **2.4 The 5-P model (Schuler, 1992)**

Strategic needs of an organization are supported with five human resource activities: Philosophies, Policies, Programs, Practices and Processes. These activities rely on each other achieving the organization's needs. Philosophy expresses the role of human resources in the overall success of the business and all embracing values and guiding principles for managing people. Policies provide guidelines defining how these values, principles and the strategies should be applied and implemented in specific areas of HRM. Further, programs enable HR strategies, policies and practices to be implemented according to plan in a way that give answer to the specific questions (for example, what kind and how many people will be required?). Practices provide understanding of individual roles, comprising the informal approaches used in managing people. And finally, processes are formal procedures and methods used to put HR strategic plans and policies into effect.

This model to a great extent explains the importance of all five HRM activities in achieving the organization's strategic needs, and shows the interrelatedness of these activities that are often treated separately in the literature [2].

## **2.5 The European model (Brewster, 1993, 1995)**

European model is based on the premise that European organizations operate with restricted autonomy. So model deals with all constraints set on international (European Union), national (national culture and legislation), organizational (ownership) and HRM level (trade union involvement and consultative arrangements) [7]. Constraints are also described as "outer" (legalistic framework, vocational training programs, social security provisions and the ownership patterns) and "internal" (union influence and employee involvement in decision making). Further, the European model shows an interaction between HR strategies, business strategy and HRM practice, and their interaction with an external environment constituting national culture, power system, legislation, education and employee representation. This means that HR strategies are closely related to the organization strategy and external environment [2].

## **2.6 An integrative model of HRM**

Considering all previously described models of HRM Martín-Alcázar in cooperation with other authors in 2005 [5] designed an integrative model of HRM. As each of these models focuses on a specific dimension of the system, together they offer a complete explanation of this

organizational function that, in general terms, represents our common present understanding of the complex phenomenon of strategic HRM.

In model depicted in Figure 3 they define HRM as the integrated set of practices, policies and strategies through which organizations manage their human capital that influences and is influenced by the business strategy, the organizational context and the socio-economic context. Both the model and this definition highlight the main dimensions of HRM: (1) horizontally, HRM is presented as the set of strategy, policies and practices that define this system relate to each other in a synergic way to

manage and develop the stock of knowledge, skills and abilities of the organization. In this sense, human capital is considered the object of HRM. Finally, the effects of the system are considered to the consequences of HRM decisions on the individual, social and organizational level. (2) Vertically: in addition to the classical explanation of the business strategy as a contingency variable, the model considers a contextual framework for HRM characterized by a certain set of organizational and socioeconomic variables. The bidirectional sense of these relationships lets the model explain the dynamic nature of HRM (Martín-Alcázar et al. 2005).

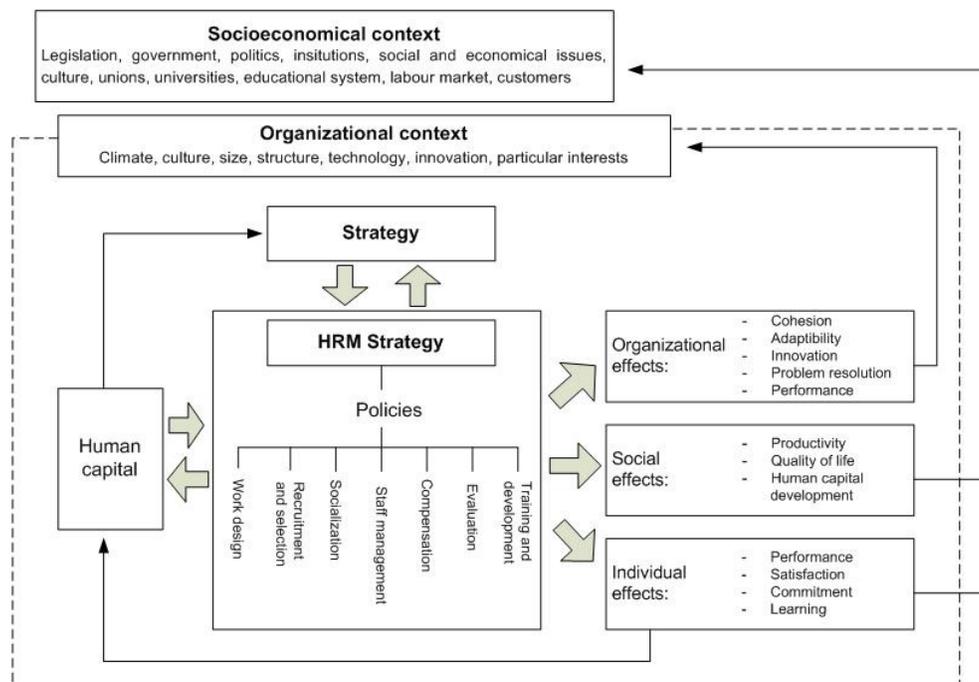


Figure 3: An integrative model for strategic human resources management [5]

### 3. HRM process at university

This previously described integrative model was our outset to examine HRM implementation at our universities. Unfortunately, our findings were inconsiderable hence there is no significant movements toward this.

University of Zagreb has established Office for Human Relations with advisor and expert for human resource activities but there is still no any HRM strategy for whole university or any polices and guidelines. Therefore, it is up to every faculty how it will solve this problem if it even realizes that it should be solved.

For example, Faculty of Organization and Informatics University of Zagreb does not have (trained) person charged for HRM activities so decisions about workforce

governance, work organization, recruitment, education and training, career development, reward systems and other HRM activities makes Management of Faculty. Decisions are made according to arising situations so there are some procedures and systems as their result (web-based system for teaching evidence, internal webpage listing current employee status/title, emerging e-portfolio).

As for the University of Zilina, it specifies following long-term goals:

- To accomplish 40% share of professors and associated professors from their pedagogical and research staff.
- To improve the conditions for young people (participation in the projects, social support etc.).

- To support administrative staff through its personal development in the frame of the Life Long Learning.
- To monitor and evaluate employees and their positions in organization structure in order to rationalize all activities and processes. An external organization can be engaged for this purpose.
- To develop and implement personalized information systems in order to simplify the administration procedures and ensure an access to the data for managers.

Nowadays existing personnel departments provide only some of services connected with HRM. For example recruitment, personal documents evidence and activities connected with reward administration. The Managements of Faculties work with additional HRM activities as career development, work organization and workforce governance without any system approach.

Even if the strategic aims would be formulated correctly at the University of Zilina, it would be necessary to solve the tactic part before the realization.

#### 4. Indicators

In this part, with help of Budhwar's research [2] of applicability of HRM models in India's enterprises, we list indicators of HRM models application in universities that should be examined.

##### The matching model

Are HRM practices and university strategy tightly connected? Does University Management believe they should develop HRM systems only for the effective implementation of their university strategies?

Does university consider their human resources (only) as a cost? Or do they invest resources to the training of them?

Are HRM strategies different for some levels of employees?

*Indicators:*

- number of academic people involved in formation of university strategies (education, research...)
- (non)existence of HRM bodies (office, managers, experts, advisors)
- (non)existence of HRM strategy
- number of HRM representatives in University Management
- number of HRM representatives actively involved in implementation of university strategies
- (non)existence of HR development
- total amount of money spent on education and training of academic employees
- amount of money spent on education and training per employee

- percentage of all employees that are trained in the areas of performance evaluation, communication, delegation, motivation, mentoring, team building
- difference in approach to the management of professors, assistants, technical, non-technical and other employees
- difference in sharing of organizational information with different levels of employees

##### 5-P model

In what extent is HRM integrated into the university strategies?

What is the level of responsibility for HRM devolved to particular faculty/department/employee?

*Indicators:*

- translation of HRM strategy into a clear set of work programs
- assignment of responsibilities to all professors, assistants, technical and non-technical personnel for implementing HRM policies

##### The Harvard model

How different stakeholders and situational and contingent variables influence on HRM policies and practices?

*Indicators:*

- way of communication with employees: through unions /work councils / suggestion box(es) / attitude survey / quality circles / web portals / e-mail and instant messages / no formal methods
- way of recruitment: through recruitment agencies / from current employees / by advertising internally / by advertising externally / by word of mouth/through apprenticeship / by use of search and selection consultants
- way of compensation on the basis of: total work experience (length of service) / participation of personnel in international and domestic projects / publishing new scientific papers or books or other online/printed material / achieving good results in work with students/other employees / work experience, performance and skills
- way of training and development through: assessment centres / annual career development interview / performance appraisal of employees / formal career plans / personal career plan / succession plans

##### The contextual model

What is the influence of economic (competitive pressures, ownership and control, organization size and structure, organizational growth path or stage in the life cycle and the structure of the industry), technological (type of production system), socio-political (pressure groups) factors and contingent variables (size, age, nature of organization) on HRM policies and practices?

*Indicators:*

- impact of size of university and presence of unions

- impact of university life cycle stage
- impact of Bologna process demands

### The European model

What is the influence of international institutions, national factors (such as culture, legal set-up, economic environment and ownership patterns), national institutions (such as the educational and vocational set-up, labor markets and trade unions) on HRM policies and practices?

*Indicators:*

- influence of national culture (socialization of employees, common values, norms of behavior, customs, the influence of pressure groups)
- influence of national institutions (labor laws, trade unions, professional bodies, educational and vocational training set-up, international institutions)
- influence of aspects of business environment (competition, globalization, business alliances, sophisticated information technology, changing composition of the workforce, downsizing, total management, client satisfaction)
- influence of aspects of business sector (common strategies, business logic and goals, specific regulation and standards, specific requirements and needs of clients or suppliers, sector-specific knowledge, informal or formal benchmarking across competitors, cross-sector co-operative arrangements, common developments, labor market)
- influence of international project cooperation

### The integrative model

Since this model combines characteristics of other mentioned model, indicators are not separately listed.

Finally, list of described indicators is not fixed and hence it will be updated after results of survey conducted at our universities.

## 5. Conclusion

Trying to understand ICT impact on changes in an organization, we have based on MIT90s framework where an organization is represented by five elements (strategy, structure, human resources, management processes and technology). The lack of impact of ICT on the improved organization performance is mainly caused by an organization's unwillingness to invest enough in human resources. For that reason our intention was to investigate HRM process at our universities so we could later support it with adequate ICT technology.

General ideas of existing HRM models are underlined and placed into integrative model that can be used as a starting model for university HRM model. Research

questions from HRM models are derived and indicators for every question are listed. Using proposed indicators our next step is to create a survey that will be conducted at our universities. According to survey results we will define HRM process and supporting HRIS for university.

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