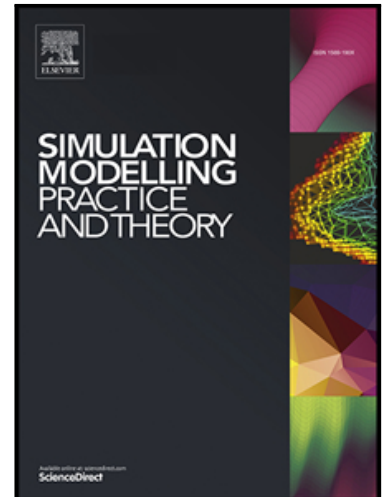


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Belhaj Rachid , Professor Tkiouat Mohamed ,  
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# An Agent Based Modeling approach in the Strategic Human Resource Management, including endogenous and exogenous factors

Belhaj Rachid<sup>1</sup> (Corresponding author), Professor Tkiouat Mohamed<sup>1</sup> and Mohamed Ali Khouaja<sup>2</sup>

<sup>1</sup>Studies and Research Laboratory in Applied Mathematics  
Mohammadia School of Engineering  
Mohamed V University, Rabat, Morocco

<sup>2</sup>IFELAB – LERMA, Mohammadia School of Engineering,  
Mohamed V University, Rabat, Morocco,

rachidblh@yahoo.fr - mohamedtkiouat@gmail.com - mohamedalikhouaja@research.emi.ac.ma

## Abstract

Human Resource (HR) takes a dominate place in the life of an organization knowing that it becomes one of the competitive factors, it is also considered an important preoccupation of governments who try to control the wage bill and the HR structure evolution. The current trend in HRM is to enhance it to the strategic level.

The HR field is a complex system, its management is affected by the HR behavior in the way that it is very tough to predict or analyze the preferences and decisions of an employee; HRM is a dynamic discipline highly linked with people behavior, which interact freely without anyone's guidance. This analysis named bottom-up starts by focusing on the characteristics of each agent at a micro-level, because the agents behaviors and interactions each other and with the external environment lead to new laws and changes that occur on the macro-level.

For this reason an Agent Based Modeling (ABM) is proposed in this paper to integrate this property (behaviorism) in modeling the HR structure evolution. This approach takes into consideration the endogenous conditions of an employee in his work and the exogenous shocks that can affect his behavior; the goal is to get closer to the HRM aspects reality and predict the future patterns of the HR structure.

**Keywords:** SHRM, Bottom-up, ABM, Behaviorism, Emergence, Structure evolution.

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