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Measurement and quantitative methods in Human Resources Management

AUTHOR: Economou, K. Themistoklis

ABSTRACT

Due to complexity caused by the human factor and the management of human behavior, Human Resources system cannot be described as a perfectly rational one, governed by specific laws and rules of cause and effect. However, most comprehensive analysis and description of the situation, enhance the possibility of effective management and decision making. That is why measurements and proper quantification is necessary within HR. An intergraded measurement system helps to form a clear picture for the effective or not operation of the dominant factor in the functioning of an organization, i.e. the workers themselves. This ability is enhanced through the use of appropriate quantitative methods, research and improvement of their reliability and validity. In this thesis a comprehensive description of the measurement system and its features in the context of HR is attempted. Both individual functions and the overall performance and its influence in the organization are examined. Moreover performance measurement models, according to them a comprehensive measurement system can be developed, are analyzed. Based on three functions of HR, human resources planning, recruiting and job evaluation, specific quantitative methods are analyzed. These methods contribute in objectivity increment, quantitative documentation, effective control and continuous improvement in the management of human resources. Specific quantitative methods and tools, in which emphasis is given, are multicriteria analysis and in particular the methods of AHP and TOPSIS, Fuzzy logic and especially methods of Fuzzy MCDM, Neural networks, Regression analysis, Time Series, Learning Curves and Markov analysis. In a complex system such as HR, with many uncertain factors, the ability to find an optimal solution is limited. However, the adoption of quantitative and analytical methods in accordance with the organization's strategic objectives and in the context of an organized measurement system that covers the entire range of functions' is proposed as the most comprehensive approach of measurement and quantification in HR.

KEYWORDS

Human Resources Management, Measurement Indicators/Metrics, Integrated measurement system, Quantitative Methods.

