Measuring Scientific Research Performance of Human Resources in Romanian Universities

Silviu-Mihail Tiţă, Department of Business Administration, University Al.I. Cuza Iasi, Iasi, Romania
Carmen Tiţă, National Inventics Institute Iasi, Iasi, Romania
Carmen Claudia Arustei, Department of Business Administration, University Al.I. Cuza Iasi, Iasi, Romania

ABSTRACT

The article includes research on the performance of human resources devoted to scientific research in major universities from Romania. This is the first article that attempts to identify, using the Scopus and Web of Science international databases, the researchers with high results in terms of key indicators to assess this domain: number of ISI articles published and number of citations. In addition the authors try to highlight how is distributed the human resource involved in scientific research in various subfields in Romania.

Keywords: Evaluation, Evaluation Indicators, Human Resources, Performance, Researcher

1. INTRODUCTION

The performance of human resource involved in scientific research is rarely at the forefront of assessing the results of field tests. Performance management has two different evaluation directions, the performance of human resource and organizational performance. Studied together, the two are conditioned on each other, the difference is only through the measurement indicators. It is obvious that if HR research performance will be high, then the organization will be one of the top in the field. Maybe compared to business environment in the scientific research, the implications of motivation and financial support and specific infrastructure for researchers to obtain relevant results lead to individual and organizational recognition. From this point of view, performance management can be defined as “Process by which the fairness of employee performance evaluation procedures affects the interests of employees

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Employee performance evaluation in general and the fairness of the evaluation procedures in particular are important management accounting issues because they are key aspects of management control systems (Lau, Oger, 2012).

Several studies investigate methods for evaluating the performance in scientific research. “Literature on performance measurement of R&D has suggested multi-dimensional measures as no single measure can capture the multi-objectives and are unable to give complete and relevant information to the management or the stakeholders about the performance of the R&D” (Werner, Souder, 1997; Brown, Gobeli, 1992; Kim, Oh, 2002; Roy et al., 2003; Karlsson et al., 2004; Wang et al., 2005; Jyoti, Banwet, 2008). “Some literatures identified the different key performance indicators, including tangible and intangible aspect” (Abramo, Cicero, D’Angelo, 2013; Chin, Pun, Lau, & Lau, 2001; Himes, 2007; Jones & Kaluarachchi, 2008; Mukherjee, Nath, & Pal, 2002; Robson & Prabhu, 2001; Wainwright, Green, Mitchell, & Yarrow, 2005; Welch & Mann, 2001):

The research-related performance of universities, as well as that of individual researchers, is increasingly evaluated through the use of objective measures, or metrics, which seek to support or in some cases even replace more traditional methods of peer review (Nightingale, Marshall 2013).

In the area of research performance, such levels of heterogeneity are confirmed by relatively high values of the Gini concentration index, although referred to the gross performance indicator of publications per researcher (Halfman & Leydesdorff, 2010).

In competitive systems, in fact, there is a concentration of top researchers in elite universities and low performers in the lower prestige institutions (Abramo, Cicero, D’Angelo, 2013).

For employees, performance measurement can be a motivational element such as “performance evaluation and rewards are key elements for motivating individuals in an organization” (Horngren, Datar, Foster, Rajan, & Ittner, 2009):

Strategic human resource management (HRM) researchers argue for a focus on the bundles of human resource (HR) practices in place, rather than individual practices, as a primary unit of analysis when examining the impact of HR systems on individual and organizational performance (Jiang, Lepak, Han, Hong, Kim, Winkler, 2012; Huselid, 1995; MacDuffie, 1995)

In most countries in South East Europe, the universities are the main entities with performance in scientific research and in many cases, the staff with teaching activities have high performance in scientific research. Compared to countries in other parts of Europe where “higher education systems are generally composed of public universities with relatively low autonomy, and are often characterized by weak overall performance with little differentiation among institutions” (van der Ploeg & Veugelers, 2008), the scientific performance of countries in the region depend largely on universities. Romania confirms the above, because according to analyzes conducted by the National Authority for Scientific Research, few university research entities have a different level of performance comparison, in this case only the National Institute for Research and Development Horia Hulubei of the National Institute of Development for Materials Physics.

Individual performance depends largely on the research area, the number of journals and their international relevance. In recent years there has been a significant increase in the number of journals indexed in international database from areas not covered so far especially in social and human sciences. If, for a researchers in exact sciences such as physics, chemistry and mathematics finding and publishing in
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