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HRM practices enhancing research performance

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Abstract

This paper reviews the literature on research performance with the focus on human resource management (HRM) practices. Attention is directed to specific correlates that influence high research performance at institutions of higher education. To answer the research question an extensive analysis of previous research studies is conducted. This study imparts a clarification of specific HRM practices that influence individual research productivity and lead to research excellence. HRM practices are classified into skill-enhancing, motivation-enhancing and opportunity-enhancing practices for research-oriented work. Results reflect the references of previous studies to analyse determinants of research performance in a complex and structural manner and reveal a specific set of HRM practices that enable to transform personal characteristics into performance. Institutions of higher education can use the findings effectively applying HRM practices enhancing research performance.

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Introduction

To enhance research excellence, institutions of higher education have to answer the following important question: How to stimulate research activity and its productivity among their researchers? This in turn necessitates effective Human Resource Management (HRM) practices that would enhance research productivity and allow to reach organizational goals. Although there are a lot of studies dedicated to HRM practices' influence on performance, there is still a lack of research analysing specific determinants of individual research performance.

The objective of the study is to identify specific HRM practices implemented by institutions of higher education (IHE) that influence individual research productivity and lead to research excellence.

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Researchers in HRM analysed the relationship between HRM practices and firm performance (different focus studies): work practices and financial performance (Huselid, 1995), progressive HRM practices (those affecting employee skills, employee motivation, and the structure of work) and positive perceptual measures of organisational performance (Delaney & Huselid, 1996); psychological measures focus - correlation between work climate, HRM practices and business performance (Gelade & Ivery, 2003); relationships between top management team social networks and firm performance (Collins & Clark, 2003); industry characteristics' influence on the extent of the relationship between high-performance work systems and productivity (Datta, Guthrie & Wright, 2005); strategic HRM impact on organisational performance (Green, Wu, Whitten, & Medlin, 2006), effective HRM practices and positive relation on job performance (one university case, Tabiu & Nura, 2013).

However, there is still a lack of research dedicated to the enhancement of research productivity of academic staff, especially identifying and empirically testing specific HRM practices. It is noteworthy, that identifying factors influencing high quality research is a crucial issue, as for the past several years research productivity is the main challenge for European IHE (as well as an important part of faculty appraisal systems). It can be seen that European IHE now strive to put an emphasis on high quality research output and to find an appropriate model to be adopted to achieve the main goal of IHE – enhancement of high quality research. This in turn necessitates effective HRM practices implemented by IHE that influence individual research productivity and lead to research excellence.

This study highlights specific HRM practices that stimulate research performance at IHE.

1. HRM practices: importance in enhancing performance

Researchers state that institutions differ in their objectives in managing human resources which are based on desired employee characteristics, attitudes, and behaviours and are derived from HRM strategy and organizational goals (Arthur, 1994; Boselie, Brewster & Paaue, 2009). HRM practices are viewed as broad HRM routines and techniques that ensure the actual implementation of HRM policies (Kepes & Delery, 2007, cited in Bjorkman, Ehrnrooth, Makela, Smale, & Sumelius 2014, 126). Furthermore, Boselie et al. (2009) identified a lack of HRM research on multiple HRM practices at the individual employee level and multiple level research looking at the impact of HRM on employees and the aggregated effects at the organization level.

Wright, McCormack, Sherman & Mc-Mahan (1999, 552) based on previous research defined human resource practices as „the organizational activities directed at managing the pool of human capital and ensuring that the capital is employed towards the fulfilment of organizational goals“. Furthermore, Wright et al. (1999) proposed that HRM practices could be considered as means through which institutions can increase the skills of the employees and provide incentives institution's members to contribute. In this respect knowledge, skills and abilities (KSAs) of the individual members of organizations are important determinants influencing individual and firm performance.

It is also noteworthy, that Bowen & Ostroff (2004) defined the HRM process as influencing the clarity of the signals that the practices send to employees about desired behaviours, whereas Ehrnrooth & Bjorkman (2012, 1110) adopted the following extended definition: „The “HRM process” refers to the generic process qualities of HRM practices (i.e. HRM content) that impact on employee and organizational performance through their influence on employees' understanding of performance expectations and on their ability, opportunity, and motivation to comply with these expectations“.

Previous studies in research performance area lack of papers that describe the theoretical frameworks and explain how the research subject is conceptualized and defined (Boselie, Dietz, & Boon, 2005). The aim of this study is to define HRM practices enhancing research performance that will require the selection of particular HRM practices (Boselie, Dietz, & Boon, 2005), in keeping with the theoretical framework. The theoretical framework of this research paper will be based on AMO (Ability, Motivation and Opportunity) theory proposed by Appelbaum, Bailey, Berg & Kalleberg, (2000) and developed by Boselie, Dietz & Boon (2005). The AMO theoretical framework is dominant in research on employee-level analysing HRM's effect on performance (Boselie et al., 2005).

HRM systems have been recognized as one potential means through which organizations can stimulate effective knowledge behaviours (Chuang, Jackson, & Jiang, 2013). However, despite numerous studies analysing HRM practices influence on employee attitudes, behaviour and productivity, there has been very little research examining how HRM systems influence research output—in particular, researchers' productivity.

2. HRM practices enhancing research-oriented work

Organization's total HRM system typically comprises many HRM practices, but not all of those practices are likely to directly influence knowledge development (Chuang et al., 2013). To identify practices that comprise a HRM system for research enhancing activities AMO approach (Appelbaum et al., 2000) is adopted to propose that HRM systems for research-oriented work should include ability-enhancing HRM practices, motivation-enhancing HRM practices, and opportunity-enhancing HRM practices.

Paauwe & Boselie (2005, 73) reported the linkages of Appelbaum et al. (2000) AMO-model through (1) ability/skills (*eg* formal and informal training, education), (2) motivation/incentives (*eg* employment security, information sharing, internal promotion opportunities, fair payment) and (3) opportunity to participate (*eg* autonomy, team membership, communication). Analysing the particularities of research performance - more highly skilled jobs are expected to be intrinsically rewarded as opportunities to participate in substantive decisions challenge workers and require them to be creative and to use their skills and knowledge (Appelbaum et al., 2000).

Previous studies on research performance identified the key individual factors enhancing research performance: inner power to conduct research (inner motivation) (Levitan & Ray, 1992; Bland, Seaquist, Pacala, Center, & Finstad, 2002; Bland, Center, Finstad, Risbay, & Staples, 2005; Fox, 1983; Creswell, 1985; Kiewra & Creswell, 2000), ability to allocate time to research (Creswell, 1985; Levitan & Ray, 1992; Bland et al., 2002, 2005; White, James, Burke, & Allen, 2012), outside communication (communication with scholars and networking through international conferences (Levitan & Ray, 1992; Teodorescu, 2000). Extrinsic motivation is approved to be less significant for productive researchers than autonomy and inner power to conduct research (Creswell, 1985). Appraisal systems are important factors but not sufficient in enhancing research performance (Harris, 2008; Herdlein, Kukemelk, & Türk, 2008).

As HRM practices serve to manage employees towards individual performance and fulfillment of organizational goals (Jiang et al., 2012), HRM practices enhancing research performance will be defined according to categories of HRM practices.

2.1. Skill-enhancing HRM practices for research-oriented work

The primary objectives (based on Chuang et al., 2013) of skill-enhancing HRM practices for research-oriented work are ensuring that individuals have and continuously improve the knowledge, skills, and abilities needed to perform research-oriented work. Skill-enhancing HRM practices are proposed to be dedicated to ensure research enhancing determinants, previously defined as important in stimulating researchers' productivity. Considering **recruitment practices hiring freshly minted PhDs** was identified as important factor in enhancing research productivity (Smith, Fox, Park, & Lee, 2008). Additionally, Smeby & Try (2005) reported that proportion of faculty members' with PhD's have significant impact on research output. **Developing training** to enhance research activities *clarity in writing* (writing in a manner to clarify and simplify text arguments, Kiewra & Creswell, 2000), and *advanced research skills* (being comfortable with statistics, study design, data collection methods, and advanced methods, Bland et al., 2005) is proposed to include. Furthermore, *ability to manage time* and dedicate sufficient time to research is considered as important determinant of research productivity (Creswell, 1985; Levitan & Ray, 1992; Bland et al., 2002, 2005; White et al., 2012) and thus necessary to ensure through adequate training (in writing, advanced research skills and time management) practices.

2.2. Motivation-enhancing HRM practices for research-oriented work

The primary objective (based on Chuang et al., 2013) of motivation-enhancing HRM practices is to drive attention to research activities, to motivate researchers to contribute to research activities and then to induce and enhance individuals' discretionary effort.

Research in the area of *academic staff performance appraisal* approves the need to revise motivation as well as appraisal systems in order to increase research productivity: the payment-by-performance system and stimulation of publication of research works (Türk, 2003), financial incentives to motivate higher research productivity levels (Honeycutt, Thelen, & Ford, 2010). Furthermore, satisfaction with the promotions system results in higher research performance and vice versa (Ramsden, 1994).

Studies in performance appraisal area support the relevance of the appraisal although both positive and negative aspects are noted (Herdlein, Kukemelk, & Türk, 2008). Furthermore, results of previous studies indicate a need, apart from appraisal systems, to investigate other critical aspects of research performance enhancement (stimulation). Harris (2008, 374) suggests that one of the goals of encouraging publication is possibility assess faculty performance by a kind of *objective nature measure* (comparing to teaching and service) and emphasizes that “a count of publications is a part of most faculty evaluation systems, and a measure of journal quality is often a part of this calculation“. Furthermore, Harris (1990) reported that not only quantity, but also quality, impact and importance are related to research performance. Therefore an important role in the area of research performance should be paid to the aspects of research quality to go in line with increasing quality requirements and setting HRM practices through **performance appraisal systems** that enhance publishing in top-tier journals.

Manning & Barrette (2005) proposed a method of *assessment of research productivity and quality with both quantitative and qualitative approaches* which was designed to raise the quality of research in a school of management. As expected, results indicated an increase in the number of publications in high level (top quality) journals. To stimulate research and influence a shift from lower quality journals to higher level journals, a monetary award program was implemented and a list of ranked journals was developed. Furthermore, Manning & Barrette (2005, 273) defined that “publication productivity is used as an objective measure to reflect the reputation of individual scholars as well as their institutions“.

2.3. Opportunity-enhancing HRM practices for research-oriented work

The primary objective (based on Chuang et al., 2013) of opportunity-enhancing HRM practices is to create appropriate conditions for researchers who have the needed competencies and adequate motivation to engage in research-oriented work. Social-communication is defined as an essential factor in research enhancing activities (Creswell, 1985, Kiewra & Creswell, 2000; Teodorescu, 2000; Bland et al., 2005). Thus, a HRM system that provides opportunities for researchers to connect with others within and outside an organization can support and facilitate research performance. Fox (1983) scrutinized the literature on correlates and determinants of publication productivity and reported that psychological factor “self-direction” is important determinant of the most productive scientists. *Autonomy* was identified in previous studies as an important predictor of high performance (Bland et al., 2005; Wood, 1990). Bland et al. (2005, 228) reported findings of one medical school and confirmed that an individual’s research productivity is influenced by autonomy and commitment which were described as having “academic freedom, planning one’s own time and setting one’s own goals, but being also committed to and playing a meaningful role within the larger organization“. Wood (1990) reported the results from one Australian university and indicated that autonomy in selecting research topics is essential in research performance. Thus, *autonomy in research agenda* is very important and has to be ensured.

Halilem, Amara, & Landry (2013) described a significant shift in the way of conducting research, from individual based work to an organization of **work in teams** of scientists and provided a model of research team performance and effectiveness. Fox & Mohapatra (2007) revealed that performance is related to scientists’ work groups and indicated team composition variables of gender of faculty members together in relationship to publication productivity and concluded that “the key variable is the interaction between being a male faculty respondent and having higher numbers of male graduate students on the team“ (p.560). As sample included doctoral-granting departments of computer science, chemistry, electrical engineering, microbiology, and physics, further research on social sciences should be developed as well. Thus *support of team work* is of great importance evaluating opportunity-enhancing practices.

Communication and networking of researchers are identified by previous studies as significant determinants of research productivity (Pelz, 1956; Creswell, 1985, Kiewra & Creswell, 2000; Teodorescu, 2000; Bland et al., 2005). Outside communication is approved to be the key condition for high level research productivity (Levitan & Ray, 1992; Teodorescu, 2000). Kiewra & Creswell (2000) emphasized the importance of *effective collaboration with talented students* in publishing articles. The majority of previous research identified communication outside institution as important correlate of productive researcher: interaction often on academic issues with outside colleagues (Levitan & Ray, 1992), networking through international conferences (Teodorescu, 2000), sharing ideas at professional meetings and in publications (Harris, 2008), communication with external professional network (Bland et al., 2005). Furthermore, *the number of research projects undertaken*, simultaneously, was identified an important dimension of work practices in developing research activities (Fox & Mohapatra, 2007). Adequate HRM

practices have to be designed to empower employees to use their skills and motivation to achieve research-oriented goals. Therefore, *involvement in projects, support of work in teams, encouragement to communicate, especially outside institution and collaborate with talented PhD students, and adequate autonomy in research agenda* have to be assured to enhance research-oriented work.

It is also noteworthy, that variables of research performance measuring have been analysed in different study fields and countries. For instance, an analysis of research activity in business management studies in the UK found articles in refereed academic journals, as measure of research output (Taylor, 1994). Quite a number of studies have been conducted in Australia that looked into: measures of research output of Australian economics departments and construction of publication measures (Pomfret & Wang, 2003); ranking Australian faculties by the number of refereed articles (output) and based on it classification of faculties of one discipline area (commerce) into groups that exhibit similar measures (Valadkhani & Ville, 2010). Recently, Bacon, Paul, Stewart & Mukhopadhyay (2012) proposed a new tool for objective research performance evaluation that combined journal quality, quantity, and author contribution to form judgments of a scholar's performance and tested it with marketing faculty at a university in the US. Moreover, Ying & Sung (2000) in their research also considered contracts, patents and prizes as extra output items and classified staff involved in research activities into researchers and research –supporting staff. Thus standard research outputs (that are defined as the most significant indicators of academic staff productivity) are: journal articles, books and published official reports, scientific journal quality and author contribution.

Conclusions

Despite of abundance of research on HRM-performance linkage, there is still a lack of studies, dedicated to enhancement of research performance through HRM practices. While research excellence is the main challenge for European institutions of higher education for the past several years. To identify research enhancing HRM practices, key individual factors of productive researchers were identified and the ability-motivation-opportunity (AMO) approach was adopted. As a result skill-enhancing, motivation-enhancing and opportunity-enhancing HRM practices for research-oriented work were revealed: skill-enhancing (recruitment of freshly minted PhDs; training in writing, advanced research skills and time management), motivation-enhancing (academic staff assessment with both quantitative and qualitative approaches) and opportunity-enhancing (involvement in projects; support of work in teams; encouragement to collaborate with talented PhD students and to communicate outside institution; and adequate autonomy in research agenda). This identification provides theoretical answer to the question *How to stimulate research activity among researchers and what effective HRM practices to implement* to reach organizational goals. Furthermore, administration of universities can incorporate adequate institutional policies to manage academic staff effectively applying specific HRM practices for research oriented work.

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