

## The Relationship Between Human Resource Management and Organizational Performance

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### ABSTRACT

This paper presents a theoretical and empirical analysis of the relationship between human resource management (HRM) and organizational performance. Theoretically, we discuss the importance of HRM for the development of resources and its impact on business performance. Empirically, we evaluated articles published on Brazilian academic journals that addressed such relationships. The results showed a lack of studies conducted at this intersection. From the universe of 2,469 articles, only 16 (0.6%) sought to relate HRM and organizational performance. We observed a dominance of isolated HR practices, which does not consider HRM as a system, and of operational performance measures, relative to financial and efficiency variables. Most studies show a positive relationship between HRM practices and performance, in line with the literature. However, we point out some methodological issues, such as the difficulty of isolating the HR practices from its context, the failure to consider the temporality of this relationship, and the comparison between companies from different industries.

**Keywords:** Human resource management. Strategy. Organizational performance. Meta-analysis.

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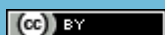
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## 1 INTRODUCTION

One of the main themes in the field of business strategy concerns the competitiveness and determinants of organizational performance (BESANKO et al., 1996; GHEMAWAT, 2002). Amongst the main theoretical strands seeking to explain business competitiveness, the Resource Based View (RBV), which focuses on the development and exploitation of valuable, rare, and non-imitable resources, gives base to the hypothesis about the importance of human resource management (HRM) to companies' competitiveness (BARNEY, 1991; BARNEY; WRIGHT, 1998). Specialized human resources are valuable and potentially rare as they detain tacit knowledge built by socially complex mechanisms. Imitating these resources is also challenging, since its relationship with organizational performance is uncertain and imprecise or, in other words, because they contain a causal ambiguity (BARNEY; WRIGHT, 1998; COFF, 1997).

Human resource management (HRM), as a key player in the creation and development of a highly productive workforce, lies in the center of the debate on the competitiveness of businesses (LEPAK et al., 2006). Practices that promote employee motivation and effort, knowledge, skills, and abilities, and opportunities for employee's contribution (JIANG et al., 2012) generate favorable conditions for the development of resources and capabilities that create value for organizations (BARNEY; WRIGHT, 1998), contributing to their performance and to the emergence of sustained competitive advantages (HUSELID, 1995; WRIGHT; MCMAHAN; MCWILLIAMS, 1994). This set of practices has been called, among other denominations, high-performance work systems (HPWS), following a line of study initiated by Huselid (1995). From this legacy, various studies tried to relate HRM systems or practices with organizational performance variables (COMBS et al., 2006; SHAW; PARK; KIM, 2013; WRIGHT et al., 2005). However, it is known that we are not dealing with a direct relation and of simple verification.

The study of organizational performance involves challenges regarding the interaction between the theoretical approach and the empirical observation of the concept (COMBS; CROOK; SHOOK, 2005). Organizational performance is a multidimensional and complex concept whose excessive simplification can prevent the assessment of management results (COMBS; CROOK; SHOOK, 2005; RICHARD et al., 2009; VENKATRAMAN; RAMANUJAM, 1986). On the one hand, the large number of variables used in the

operationalization of performance leads to different results and a large variance in conclusions, limiting knowledge accumulation (BOYD; GOVE; HITT, 2005). On the other hand, the use of unique variables of profitability brings an oversimplification of a complex and multivariate construct (COMBS; CROOK; SHOOK, 2005; RICHARD et al., 2009). Furthermore, financial performance measures do not represent the operational performance of the company and are more subject to the process of value appropriation on the part of actors involved (COFF, 1999; CROOK et al., 2011). Therefore, to support research on organizational performance the choice of performance measures should not disregard a theoretical discussion about the adopted approach.

Given the acknowledged importance of HRM for organizational performance, this article makes a theoretical analysis on these subjects and assesses empirical studies that address the relationship between HRM and performance. In the theoretical framework, we discuss challenges and difficulties inherent to research in this field, such as the need for a broader assessment of organizational resources and other causal antecedents of performance.

In the empirical stage, we evaluated articles published in major national journals that sought, somehow, to address such relationships, detailing the characteristics of samples, methods and measures and of the variables used in the operationalization of the two constructs. Finally, we discuss the results and the evidence of the impact of HRM on strategic resources development and its effect on organizational performance.

## **2 BUSINESS STRATEGY AND HUMAN RESOURCES**

The heterogeneity of the organizational performance can be explained by the choice and positioning in a given sector (PORTER, 1985), by the development of valuable, rare and non-imitable resources (BARNEY, 1991), or by the development of routines and dynamic capabilities (TEECE; PISANO; SHUEN, 1997). While the external analysis reveals the attractiveness of each industry, it is in the company's resources and capabilities that one can acknowledge the uniqueness of its attributes and explain differences in performance between companies of the same sector (BARNEY; ARIKAN, 2001).

The resource-based view (RBV) envisages the company as a collective of fungible resources, developed internally or in interaction with partners, in a singular and idiosyncratic manner to each company and interaction (BARNEY; ARIKAN, 2001). The time and social complexity involved in the development of resources are some of the attributes that makes them rare and difficult to imitate (BARNEY, 1991). In a successful strategy, valuable resources are not easily replicated by competitors, because they are the result of a unique

development path. In addition, as their relationship with performance is not clear or direct, there is a causal ambiguity between resources and performance (BARNEY, 1991; DIERICKX; COOL, 1989). Resources and capabilities bring focus to inside the organization and its interaction with a changing and unstable environment. Competitive advantage is set up within this business-environment interaction and the development of resources and responses superior to that of competitors.

According to the RBV, human resources of an organization can contribute to superior performance and become a source of sustainable competitive advantage as long as they are valuable, rare and difficult to imitate (BARNEY; WRIGHT, 1998). Human resources have the potential to contain these attributes if we consider the value of a highly skilled workforce, the relative scarcity of qualified professionals, and that the explicit and tacit knowledge of employees are built over time and through socially complex mechanisms (CROOK et al., 2011).

In this case, the role of human resources management would reside precisely in the construction and development of a workforce – also referred to as human assets (COFF, 1997) or human capital (CROOK et al., 2011) – competent, motivated and able to generate superior results (BARNEY; WRIGHT, 1998; COFF, 2002). This is called strategic human resources management, as discussed below.

### **3 STRATEGIC MANAGEMENT OF HUMAN RESOURCES**

The literature on strategic human resources management (SHRM) is based on two fundamental principles. The first concerns the strategic importance of human resources, their competencies and behaviors, whilst the second refers to the role of human resource management practices in the development of these very resources (COLBERT, 2004; BECKER; GERHART, 1996).

Research on SHRM takes into account HR systems as a whole and their impact on the organization, as opposed to the traditional perspective, which assesses HR practices separately and considers their impact on individual performance (BECKER; HUSELID, 2006). This movement toward a macro or systemic vision was due to the need for greater clarity regarding the impact of the human resources function on organizational results (SUN; ARYEE; LAW, 2007). Such an approach also reflects the understanding that, in order to be more effective, HR policies and practices must be congruent with each other (horizontal alignment) and aim to achieve the strategic goals of the organization (vertical alignment) (DELERY; DOTY, 1996).

With respect to empirical studies in the field of SHRM, the matter that still does not seem to have been fully understood concerns the set of HR practices that effectively would contribute to higher organizational performance. Delery and Doty (1996) highlight the existence of three different theoretical perspectives (universalist, contingent and configurational), each one with implicit assumptions in this regard.

According to the universalistic perspective, certain practices would always be superior to others, regardless of the company's strategic positioning. The concept of high-performance work systems or high commitment work systems seems to have emerged from this line of research. However there has been no consensus in relation to practices that should be included in these systems and, consequently, surveys have been conducted with different sets of practices (DELANEY; HUSELID, 1996; LEPAK et al., 2006), which makes it difficult for knowledge accumulation (JIANG et al., 2012). The contingency approach, best aligned with the premise of vertical alignment, assumes that HR practices should be consistent with other characteristics of the organization, including its strategies. Finally, the configurational perspective focuses on the identification of unique patterns of factors that would have a synergistic and superior effect, built theoretically from ideal types (DELERY; DOTY, 1996). Both contingent and configurational perspectives align with the RBV approach, as they understand HRM as a set of idiosyncratic resources used by the organization to achieve its strategic goals (BARNEY; WRIGHT, 1998).

In an attempt to identify dimensions or categories of practices that make up HPWS, the structure called skills-motivation-opportunity, originally proposed by Guest (1997), has been highlighted in literature. According to this framework, HR practices can be evaluated by their impact on employees' skills, their motivation and effort, and the opportunities they have to contribute (JIANG et al., 2012). Table 1 shows examples of HR practices associated with each of these categories.

<b>Dimensions</b>	<b>HR practices</b>
Competencies	Recruitment and selection; training, development and education.
Motivation and effort	Evaluation of performance, rewards, incentives, benefits, promotion and career development, and job security.
Opportunities to contribute	Workflow design, work teams, employee involvement policies, sharing information and formal systems of complaints and claims.

Table 1 – Dimensions of HR practices

Source: Jiang et al. (2012).

Jiang et al. (2012) also point out that little is known about the interrelationships between the various practices, highlighting the possibility of additive, synergistic or substitute effects. In the first case, the practices have independent effects, so that each one contributes to the effectiveness of the system. If the relationship is substitutive, it implies that one practice may be replaced by another without losses, and that one of them is generating higher operating costs without adding benefits. Finally, the relationship between practices is synergistic when one contributes to enhancing the effectiveness of the other.

In light of these practical and methodological issues, and despite the evidence of the positive impact of human resource management on different organizational results, some aspects of this relationship still lack clarity (JIANG et al., 2012). Many researchers use the term “black box” to highlight the difficulty of assessing the link between HRM and organizational performance (COLLINS; SMITH, 2006; SUN; ARYEE; LAW, 2007).

#### **4 ORGANIZATIONAL PERFORMANCE**

Studies on SHRM emphasize the role of human resources practices in achieving organizational objectives (COMBS et al., 2006; FERGUSON; REIO JR., 2010; HUSELID; JACKSON; SCHULER, 1997; OLIVEIRA; OLIVEIRA, 2011; WRIGHT; MCMAHAN, 1992). However, one of the key challenges of understanding organizational performance lies in the alignment of its theoretical definition, methodological design and research objectives.

Since organizational performance is a multidimensional concept, it seeks to measure companies' success in achieving the objectives proposed for different stakeholders in a given period (RICHARD et al., 2009). The various dimensions of organizational performance seek to encompass the diversity of interests in the company's success. One of the most influential approaches states that organizational performance is made up of three dimensions that can be considered as spheres that superimpose and complement each other (VENKATRAMAN; RAMANUJAM, 1986). The wider dimension of organizational performance would be organizational effectiveness, including economic and social goals that takes into consideration the company's relationship with society and its stakeholders. The operational dimension encompasses aspects such as technology, innovation, productivity and quality, and mediates the relationship between the company's resources and its financial performance. Finally, the financial dimension incorporates aspects of financial returns, market value and growth (COMBS; CROOK; SHOOK, 2005; VENKATRAMAN; RAMANUJAM, 1986).

Far from a consensus, the debate on organizational performance recognizes the existence of different approaches and metrics. Most of authors recognize the importance of

linking performance measures to a theoretical approach and even to a greater construct that explains the strategic advantage (COMBS; CROOK; SHOOK, 2005; RICHARD et al., 2009; VENKATRAMAN; RAMANUJAM, 1986).

## **5 RELATIONSHIP BETWEEN HRM AND PERFORMANCE**

The main premise of studies on SHRM is that human resource management practices are causal antecedents of performance (BARNEY; WRIGHT, 1998; HUSELID, 1995). Therefore, to analyze the causal relationship among constructs, it is necessary to evaluate longitudinal data. Furthermore, due to the very nature of the process by which people management practices develop resources and capabilities that impact performance, it is argued that there is a maturation period for the results to be observable. Therefore, it is recommended the observation of longitudinal data, in a period compatible with the development of resources, and a lagged analysis between cause and effect (WRIGHT et al., 2005).

Another important aspect of performance evaluation is in its hierarchical nature, with different levels of analysis or spheres of influence: business, industry and institutional context (MCGAHAN; PORTER, 1997). The evaluation of superior performance depends on the competitive environment in which the company is inserted. Similarly, the effect of investments in human resources depends on the context and the level of expertise of human capital (CROOK et al., 2011). The more human capital-intensive sectors demand more investments, whilst less intensive ones may seek competitiveness from other strategic factors (SHAW; PARK; KIM, 2013). Seen in these terms, results from HRM analysis between sectors with different specificities of resources cannot be comparable (CROOK et al., 2011).

Finally, it is important to consider that the relationship between investments in HRM and performance is mediated by resources and capabilities generated in the process. This aspect can be even more relevant when one observes only the financial performance of the organization. This is because the value created may not revert into superior profitability if appropriated by transaction partners (COFF, 1999). In the bargaining process for the value created, employees increase their bargaining power as they become more specialized and not easily replaceable (COFF, 1999). In addition, managers are recognized as actors in privileged condition of appropriating value, given their access to important information (COFF, 1999; COFF; LEE, 2003). The influence of employees and managers in the process of distribution of the value created has an impact on the costs of the company and, consequently, on its profitability (BLYLER; COFF, 2003). In this sense, the relationship between HRM and

operating performance can be more easily observed, both from the direct relationship between the two concepts and the fact that the operational performance precedes the process of appropriation (COMBS et al., 2006; CROOK et al., 2011). Financial variables, however, are more impacted by the process of appropriation and may not reflect the value created by the resources.

Taking into consideration the theoretical and methodological challenges presented here, in the second stage of this work, we sought to evaluate, by means of a meta-study, how the relationship between human resource management and organizational performance has been addressed in the main Brazilian publications in the field of administration.

## 6 METHODOLOGICAL PROCEDURES

The term meta-analysis, according to Hedges (1992), was introduced by Gene Glass in 1976 and defined as the analysis of statistical results from different studies in order to reach general conclusions. Meta-analysis techniques presuppose the use of reported correlations in studies for the subsequent calculation of the average correlations weighted by the size of the sample (HUNTER; SCHMIDT, 2004). In this study, given the limited number of quantitative studies and the unavailability of data, such as correlation coefficients of variables, we chose a qualitative approach, which allowed the inclusion of qualitative results, and characterized the study as a meta-study (PATTON, 2005).

For this meta-study, we considered all articles published in all 13 national journals within the area of Business Administration with a rating equal to or greater than B1 in the Capes's (Higher Education Personnel Improvement Coordination) Qualis system of 2012: Brazilian Administration Review, Brazilian Business Review, *Cadernos EBAPE.BR*, *Gestão & Produção*, *Organizações & Sociedade*, RAUSP, *Revista Brasileira de Gestão de Negócios*, *Revista de Administração Contemporânea*, *Revista de Administração de Empresas*, *Revista de Administração e Contabilidade da Usinos*, *Revista de Administração e Inovação*, *Revista de Administração Mackenzie* and *Revista de Ciências da Administração*. It was further established that the analysis period would comprise the years from 2007 to 2012.

The process of selecting articles was done in four stages. In the first stage, all the 2469 published articles in the selected journals were identified. In the second stage, we filtered the articles by the identification of keywords in titles and abstracts. The choice of keywords, presented in table 2, was based on bibliographical review of both themes. The keywords were also translated into English and Spanish to search in articles written in these languages. 760



articles were identified (31% out of the total) containing words related to HRM and organizational performance simultaneously.

<b>HRM</b>	HR, Human resources, Human Capital, Personnel Management, HR Practices and Policies, HR Development, Remuneration, Strategic Remuneration, Remuneration Policies and Practices, Management by Competencies, Retention, Motivation, Training and Development, Recruitment and Selection, Commitment, Organizational Learning, Leadership, Job Satisfaction, Career and Management Capacity.
<b>Organizational Performance</b>	Financial Performance, Business Performance, Organizational Performance, Operational Performance, Organizational Results, Results, Performance, Competitive Advantage, Strategy, Competitive Strategy, Organizational Strategy, Strategic Management, Strategic Behavior, Organizational Behavior, Organizational Effectiveness, Growth, Productivity and Profitability.

Table 2 – keywords for triage of articles

In the third stage, we read the abstracts of the articles identified in the previous stage, in order to identify adherence with the objective of the study. In this process, we discarded the papers that mentioned keywords only tangentially – in the contextualization of the study, for example – or when these had different meanings. For example, “employed” can refer to an employee of an organization or be a synonym of “used”. Finally, 66 articles were selected for the final evaluation stage, which consisted in integrally reading them.

Table 3 – Published, Filtered and Selected Articles

Journal	Stage 1	Stage 2	Stage 3	Stage 4
	Published	Filtered	Initial selection	Final selection
Brazilian Administration Review (BAR)	128	9	-	-
Brazilian Business Review (BBR)	117	42	2	1
Cadernos EBAPE.BR	236	68	2	1
<i>Gestão &amp; Produção</i> (G&P)	325	111	13	2
<i>Organizações &amp; Sociedade</i> (O&S)	221	63	2	-
RAUSP	160	47	4	-
<i>Revista Brasileira de Gestão de Negócios</i> (RBGN)	139	68	3	1
<i>Revista de Adm. Contemporânea</i> (RAC)	240	71	8	3
<i>Revista de Adm. de Empresas</i> (RAE)	155	28	2	2
<i>Revista de Adm. Contab. da Usinos</i> (Base)	120	38	-	-
<i>Revista de Adm. e Inovação</i> (RAI)	202	80	12	4
<i>Revista de Adm. Mackenzie</i> (RAM)	256	88	15	2
<i>Revista de Ciências da Administração</i> (RCA)	170	47	3	-
TOTAL	2469	760	66	16

In the fourth and final stage, all the 66 studies were fully read by the authors, and it was verified that only 16 (0.6% out of the total) effectively proposed to analyze the relationship between human resource management and organizational performance, from a qualitative or quantitative empirical approach. Table 1 contains data relating to the process of filtering and selection.

## 7 ANALYSIS AND DISCUSSION OF RESULTS

In the 16 selected articles, we found both quantitative (10) and qualitative (6) approaches. As for the method, the quantitative studies made use of structural equation models (4), linear regression (4), ANOVA (1), correlation analysis (1) and exploratory factor analysis (1). The six qualitative studies adopted the case study method. The samples varied both in number of companies as well as in relation to their sectors. In the analysis that follows, we discuss HRM topics, constructs and variables, approaches to organizational performance and, subsequently, the relationship between HRM and organizational performance.

### 7.1 HUMAN RESOURCES MANAGEMENT

The analysis of the constructs and variables of HR was initially divided into HRM practices and results, that is, resources developed by HRM. In the HRM practices analysis, we adopted the categorization proposed by Jiang et al. (2012), according to which the organization's performance would be impacted by the performance of employees, which in turn would be explained from the impacts of HR practices on their levels of competence, motivation and effort, and opportunity to contribute.

As shown in Table 3, nine studies addressed HR practices – four related to employees' skills, two concerning the creation of an environment propitious to contribution and only three focused on the set of HR practices.

The three papers reviewing the set of HR practices and their impact on different dimensions of performance are in line with the literature on high-performance work systems, according to which HRM should be evaluated as a whole (BECKER; HUSELID, 2006; COLBERT, 2004; LEPAK et al., 2006). However, we should point out that the operationalization of the construct proved to be relatively simplistic. In two of them, a single item measured the effectiveness of such practices and, in the third paper, the questionnaire consisted of only five items that assessed recruitment practices, training, performance appraisal and reward systems.

Five studies did not assess HR practices, but variables and constructs that typically are impacted by HRM, such as resources or organizational capabilities, namely: human capital, learning culture, knowledge management, learning orientation and organizational values. Finally, two articles, both qualitative, addressed HR practices as well as resources or capacities generated by HR actions.

Dimension	Variables	Article
<b>HR Practices</b>		
Competencies	Volume of investments in R\$ (BRL)	El-Kouba et al. (2009)
	R&D employees' educational level (number of masters and PhDs); employees' educational level (IT training); company support for training.	Gomel and Sbragia (2011)
	Program's effects on the individual, the team and the management of the company.	Perin et al. (2009)
	Performance assessment and skills development.	Ubeda and Santos (2008)
Opportunity to contribute	Employee-management relationship; responsibility, freedom, decision making, control exercise for managers; use of power.	Kirjavainen et al. (2010)
	Confidence, commitment; teamwork.	Moori and Domenek (2007)
Set of Practices	Recruitment; training; performance evaluation; reward system; benefits system.	Jabbour et al. (2012)
	Ability to keep staff well trained and motivated to work (single item).	Maciel and Camargo (2009)
	Effectiveness of HR management in relation to competition (single item).	Perin, Sampaio and Hooley (2007)
<b>HR / Resource Results</b>		
Human Capital	Relationship between workers, employer-employee relationship, turnover, problems when someone leaves the company, difficulty in assessing the consequences of decisions.	Ferreira and Martinez (2011)
Learning culture	Opportunities for continuous learning; questioning and dialogue; collaboration and team learning, systems to capture and share learning; delegation of power and responsibility; development of the organization's systemic vision; stimulating strategic leadership towards learning.	Menezes, Guimarães and Bido (2011)
Knowledge management	Informality in the communication, horizontal hierarchical structure, teamwork, quality of leadership, support from senior management.	Oliveira et al. (2012)
Learning Orientation	Commitment to learning; shared vision; open minded.	Abbade, Zanini and Souza (2012)
Organizational values	Respecting stakeholders; entertainment for employees; competent performance; prestige.	Melo and Domenico (2012)
<b>Practices and Results</b>		
Practices of T&D Results of R&S	Practices: training expenditures as a proportion of the company's revenue. Results: professionals (different academic levels) working in R&D.	Santos, Basso and Kimura (2012)
HR management HR results	Practices: training, encouraging cooperation, teamwork. Results: turnover.	Zen and Fracasso (2012)

Table 4 – Human resource management variables

## 7.2 ORGANIZATIONAL PERFORMANCE

As shown in table 4, 26 performance variables were identified in the 16 selected articles, with the majority being of operational performance (12 articles), followed by financial performance variables (five articles). Only three articles treated both dimensions concomitantly. This result differs from that found in international studies, in which financial performance variables are more frequent (COMBS et al., 2006; CROOK et al., 2011). The use of operational performance variables best captures the impact of HRM and resources on the performance, since the operational performance is a direct mediator of this relationship and it does not suffer from the impact of the appropriation of value (COMBS et al., 2006; WRIGHT et al., 2005). The combination of financial and operational variables, however, allows both the evaluation of HRM results as well as the impact of value appropriation in the process.

The most common variables were innovation and profitability, but, in general, we verified a low repetition of variables and of the metrics employed. The use of different psychometric scales (seven articles) and subjective analysis (five articles) for performance variables reduces the comparability of results between the studies. Among the studies, there was also the use of metrics that do not correspond to the organization as unit of analysis (teams, for example) and, for the purposes of this study, we did not considered these metrics.

Despite arguing that HR practices and resulting resources can lead to competitive advantage, few studies presented analyses of competitiveness. The analysis of the effects of HRM on the performance of the organization does not allow conclusions about the competitiveness of practices or their capacity to lead to competitive advantage. Finally, we note that the operationalization of the organizational performance construct is not preceded by a theoretical definition, leading to an obscure process of choice of variables. Variables from different dimensions are beneficial, but a convergent validity analysis is required. Moreover, it should be avoided variables of superimposing dimensions and measures of low theoretical or empirical relevance (COMBS; CROOK; SHOOK, 2005; RICHARD et al., 2009).

Variables	Method/ measurement	Studies
<b>Financial Performance</b>		
Profitability, Return on Assets, Return on Equity, Return on Sales and Operating Margin	Psychometric scale and secondary data	Abbade, Zanini and Souza (2012); Santos, Basso and Kimura (2012); Maciel and Camargo (2009)
Sales growth	Psychometric scale	El-Kouba et al. (2009); Maciel and Camargo (2009)
Performance in relation to competitors	Psychometric scale	Maciel and Camargo (2009)

Revenues	Psychometric scale	El-Kouba et al. (2009)
Export volume	Secondary data	Gomel and Sbragia (2011)
Satisfaction with respect to investment	Psychometric scale	Maciel and Camargo (2009)
<b>Operational Performance</b>		
New products (development, introduction and launching)	Subjective and psychometric scale	Kirjavainen et al. (2010); Perin, Sampaio and Hooley (2007); Oliveira et al. (2012); Zen and Fracasso (2012)
Time-to-market	Psychometric scale	Jabbour et al. (2012); Menezes, Guimarães and Bido (2011).
Productivity	Psychometric scale	Ferreira and Martinez (2011); Menezes, Guimarães and Bido (2011)
Flexibility	Subjective and psychometric scale	Perin et al. (2009); Jabbour et al. (2012)
Success of new products (relevance in total revenues)	Psychometric scale	Perin, Sampaio and Hooley (2007); Zen and Fracasso (2012)
Operational cost	Psychometric scale	Jabbour et al. (2012)
Customer loyalty	Psychometric scale	El-Kouba et al. (2009)
Number of customers and contracts	Psychometric scale	El-Kouba et al. (2009)
Meeting deadlines	Psychometric scale	Jabbour et al. (2012)
Time of response to complaints	Psychometric scale	Menezes, Guimarães and Bido (2011)
Inventory reduction	Subjective	Moori and Domenek (2007)
Reliability in the delivery of products	Subjective	Moori and Domenek (2007)
Innovation Pioneering	Psychometric scale	Perin, Sampaio and Hooley (2007)
Intellectual production	Subjective	Ubeda and Santos (2008)
Patents	Subjective	Zen and Fracasso (2012)
Transfer of technology	Subjective	Ubeda and Santos (2008)
Growth of activities	Psychometric	Maciel and Camargo (2009)
<b>Others</b>		
Achieved goals (financial and operational)	Secondary data and psychometric scale	Melo and Domenico (2012); El-Kouba et al. (2009)
Survival	Psychometric	Maciel and Camargo (2009)
Success in business	Psychometric	Maciel and Camargo (2009)

Table 5 – Organizational performance variables

### 7.3 RELATIONSHIP BETWEEN HRM AND PERFORMANCE

The main focus of this study was the analysis of the bivariate relationship between HRM and organizational performance, in the form of HR policies and practices or of resources and capabilities generated by these. In eleven of the selected articles, this relationship was positive, and in the eight studies that promoted statistical tests, they were significant – see Appendix 1. Five studies showed no conclusive results, whether by lack of segregation of practices between organizations/projects of low and high performance, or for

the non-consummation of empirical test among the constructs (FRACASSO; ZEN, 2012; KIRJAVAINEN et al., 2010; OLIVEIRA et al., 2012; SANTOS; BASSO; KIMURA, 2012; UBEDA; SANTOS, 2008).

The positive result among the constructs corroborates to the theoretical discussions about the ability of HRM to develop resources that create value for businesses (BARNEY; WRIGHT, 1998; BECKER; GERHART, 1996) and to the empirical studies that demonstrate the positive relationship between HRM and organizational performance (COMBS et al., 2006; CROOK et al., 2011; OLIVEIRA; OLIVEIRA, 2011).

However, it is necessary to discuss some relevant aspects of the relationship between these constructs, because by ignoring aspects of endogeneity in the choice of HRM investments, the resulting parameters and coefficients may be biased (ANTONAKIS et al., 2010). Therefore, we discuss aspects that require further investigation.

The first observation, which constitutes a contribution of this study, concerns the analysis of competitiveness of HRM in relation to other resource development practices in companies. There is a wide range of resources and capabilities that can be identified as antecedents to performance, but not all are able to lead to superior performance (NEWBERT, 2007). The positive result of practices and resources on the performance of a single company does not allow conclusions about their competitiveness, as those practices and resources may simply be competitive parity factors. Furthermore, as the relevance of resources also varies across different sectors and industries, studies that mix different industrial sectors do not allow acknowledging whether the strategy is idiosyncratic to the company or a self-selection process, inherent in the industry. Among the eight studies with positive and significant results, three studies combine different sectors and none of them use control variables to deal with the effect of omitted variables, aspects that limit conclusions on the effectiveness of HRM practices.

The analysis of the competitiveness of resources also demands the observation of performance measures in accordance with their potential for appropriation. This aspect is particularly relevant in the analysis of HR practices, because managers and employees have great ability to identify value, generating an information asymmetry that favors them in the process of appropriation (BLYLER, COFF, 2003; COFF, 1999). With time, this process of appropriation can decrease shareholders' interest in investing in human resources, given its low capacity of appropriation, as well as increase employee turnover potential (SHAW;

PARK; KIM, 2013). This important aspect to business management practitioners is not contemplated in the studies we analyzed.

The third contribution of this article is in the observation of the longitudinal aspect of the relationship between HRM and performance constructs. As an antecedent to the development of resources, investment in HR may involve only negative results, that is, costs, at a first moment. However, it is expected that, over time, such investments will generate superior human capital that will positively affect organizational performance. In this sense, the analysis of the relationship between HRM and performance would be ideally made in longitudinal studies, or in situations of recognized maturity of HR practices. Out of the studies analyzed, only three showed longitudinal approaches in case studies and two introduced longitudinal comparison variables, like sales growth, but none of them worked with lagged variables analysis.

Finally, the fourth contribution concerns the possibility of isolating HRM practices to analyze its impact on performance. On the one hand, isolated practices do not depict broader constructs, such as high-performance work systems (BECKER; HUSELID, 2006; DELERY; DOTY, 1996). On the other hand, the non-observation of the larger context of the practices also does not refute the hypothesis that there are superior HRM systems or even other omitted resources and variables that may lead to superior performance. Without a more comprehensive analysis of HRM, including the different interrelations between the practices (JIANG et al., 2012) and their impact on the dimensions of performance, a conclusion about the strategic importance of human resources for the organization becomes questionable.

## **8 FINAL CONSIDERATIONS**

The aim of this study was to analyze how the Brazilian scientific production deals with the relationship between human resource management and organizational performance. Its relevance is in the acknowledgment of the importance of people in the development of resources and capabilities (BARNEY; WRIGHT, 1998; HELFAT; PETERAF, 2003) and in the creation of sustainable competitive advantages (BARNEY, 1991). As a limitation, we highlight the time frame and the initial screening, done only from the abstracts.

The literature review showed a wide range of relations between HRM practices and operating and financial performance of organizations (HUSELID, 1995; WRIGHT et al., 2005), as well as practical and methodological issues. The empirical part of the study showed that the subject is not yet dominant in national production and that there are few attempts to

measure the relationship between these constructs. The results also showed gaps in the design and implementation of researches.

With regard to performance measures, there are important deficiencies in the measurement of variables, in the combination of more than one dimension of performance, in the comparative analysis between companies, and in the temporal analysis of performance. With respect to HRM, we verified the concomitant use of variables related to HR practices and results, which is not recommended (JIANG et al., 2012). We also identified the use of a wide range of variables, a point also noted in the international literature (DELANEY; HUSELID, 1996) and that has been the target of criticism, since it imposes limitations on knowledge accumulation (BOYD; GOVE; HITT, 2005).

In the analysis of the few studies that seek to assess the impact of HRM on performance, we observed a dominance of positive results, in line with evidence found in the international literature (CHADWICK; SUPER; KWON, 2014; COMBS et al., 2006; CROOK et al., 2011; RAZOUK, 2011; SUN; ARYEE; LAW, 2007). However, considering the dispersion of variables and the methodological issues, we could not draw more thorough conclusions about the Brazilian reality, suggesting a fruitful field for future research.

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**APPENDIX 1 - SELECTED ARTICLES AND RESULTS**

Authors	Strategy	Observation	Sector	HRM Dimensions	Resources	Performance Dimensions	Result
Abbate, Zanini and Souza (2012).	Transversal	123 companies	Several		Learning orientation	Financial	Positive***
Ferreira and Martinez (2011)	Transversal	440 employees of companies	Services		Human capital	Operational	Positive***
Gomel and Sbragia (2011)	Transversal	488 companies	Software	Competencies		Financial	Positive*
Jabbour et al. (2012)	Transversal	75 companies	Auto Parts	Cooperative		Operational	Positive**
Maciel and Camargo (2009)	Transversal	119 companies	Retail clothing	Cooperative		Financial and Operational	Positive*
Melo and Domenico (2012)	Transversal	1 bank and 271 branches	Finance		Organizational values	Financial and Operational	Positive*
Menezes, Guimarães and Bido (2011)	Transversal	266 individuals	Power		Learning culture	Operational	Positive***
Perin, Sampaio and Hooley (2007)	Transversal	293 companies	Manufacturing and services	Cooperative		Operational	Positive**
El-Kouba et al. (2009)	Longitudinal case study	1 company	Communication	Competencies		Financial and Operational	Positive <sup>b</sup>
Moori and Domenek (2007)	Longitudinal case study	1 company	Pulp and paper	Opportunity to contribute		Operational	Positive <sup>a</sup>
Perin et al. (2009)	Case study	3 companies	Logging and appliances	Competencies		Operational	Positive <sup>a</sup>
Ubeda and Santos (2008)	Longitudinal case study	1 Study Centre	Research institution	Competencies		Operational	Not conclusive
Kirjavainen et al. (2010)	Case study	1 company	B2B	Opportunity to contribute		Operational	Não conclusivo
Oliveira et al. (2012)	Case study	1 company	Eletronics		Knowledge management	Operational	Not conclusive
Zen and Fracasso (2012)	Case study	3 companies	Eletronics	HR results management		Operational	Not conclusive
Santos, Basso and Kimura (2012)	Transversal	2116 companies	Several	Results of R&S Practices of T&D		Financial	Not conclusive

<sup>a</sup>. Qualitative studies without statistical test.

<sup>b</sup>. No information on the level of significance

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001

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