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# Human Resource Management Practices, Person-Environment Fit and Financial Performance in Brazilian Publicly Traded Companies

Bruno Henrique Rocha Fernandes, Amir Rezaee, Jucelia Appio

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***Abstract*—**The relation between Human Resource Management (HRM) practices and organizational performance remains the subject of substantial literature. Though many studies demonstrated positive relationship, still major influencing variables are not yet clear. This study considers the Person-Environment Fit (PE Fit) and its components, Person-Supervisor (PS), Person-Group (PG), Person-Organization (PO) and Person-Job (PJ) Fit, as possible explanatory variables. We analyzed PE Fit as a moderator between HRM practices and financial performance in the "best companies to work" in Brazil. Data from HRM practices were classified through the High Performance Working Systems (HPWS) construct and data on PE-Fit were obtained through surveys among employees. Financial data, consisting of return on invested capital (ROIC) and price earnings ratio (PER) were collected for publicly traded best companies to work. Findings show that PO Fit and PJ Fit play a significant moderator role for PER but not for ROIC.

***Keywords*—**Financial performance, human resource management, high performance working systems, person-environment fit.

## I. Introduction

DURING past few years, an important bulk of literature have been tackling the question of the relationship between HRM practices and Organizational Performance [1]-[5]. They investigate the efficacy of the high performance work system (HPWS), a construct that proclaims that HRM practices increase their benefits on performance when used in an integrated and synergic way, instead of in isolated and disarticulated practices [6]. For instance, [4] provides some support for this notion of HPWS, considered as group of separated but interconnected HR practices designed to enhance employee and firm performance through improving employee skills, motivation and opportunity to contribute.

According to [7], organizational performance related to HRM practices can be analysed in four dimensions: HR Results, considering variables like absenteeism, organizational citizenship and so on; Organizational Results, including organizational innovation and new product development, Efficiency Improvement and other; Financial and Investment Results, like profitability or profitability accounting, market share etc; and Capital Market Results, with variables like market-to-book value, price earnings ratio, Q –Tobin, among others. Considering the Balanced Scorecard framework [8], there are causality links among performance dimensions: HRM practices have direct influence over HR Results but the further we go on this causality chain, the more mediation or moderation variables are supposed to intervene and, consequently, the more difficulty we will have to realize HRM practices influence on performance.

Analyzing the literature and its gaps provides some hints about the link between HRM, financial results, and capital market results. However, the variable that can interfere in this relationship is the Person-Environment Fit (PE Fit) which is associated to the perception an employee has about the organization environment and relationship he/she works in [9]. That argument, grounded in the Social Exchange Theory (SET), which supports this interference, suggests that when employees perceive the firm demonstrates concern with them, they will correspond by improving their performance and, ceteris paribus, enhancing firm performance [10]. In this line, this paper intends to analyze how HRM practices and PE Fit can be related to the Financial and Capital Market Performance, assuming that the more sophisticated the HRM practices are – up to the point of being considered HPWS – the better the performance.

Therefore, this article investigates the extent to which HRM practices are related to organizational performance, influenced by the PE Fit, considering the "Best Companies to Work for" database in Brazil. The current paper is structured in four sections after this introduction. In the first section, we present the theoretical reference that justifies this article. Later on in Section II, we describe the methodological analysis, the results of which are presented and discussed in Section III. In the end, the conclusions and implications of this study in the field of knowledge are recommended.

## II. Theoretical Background

According to the Best Practices School, there is a specific set of HRM practices that increases organizational performance [11]. However, this school is criticized because it indicates best practices despite the diversity of businesses and contexts in which organizations are inserted, e.g. industry, company's size and production policies (e.g. [6], [12], [13]), cultural differences between countries [14] and the presence of other actors, like trade unions [15].

In the Best Fit School, another perspective is explored:

B. H. R Fernandes is with the Pontific Catholic University of Parana (PUCPR), Curitiba, PR, Brazil (e-mail: rocha.fernandes@pucpr.br).

A. Rezaee is with the Institut Supérieur de Gestion, Business School, Paris, France (e-mail: amir.rezaee@isg.fr).

J. Appio is with the West State University of Parana (UNIOESTE), Francisco Beltrão-PR, Brazil (corresponding author, phone: +554635271160; +554999124087; e-mail: juceliaappio@yahoo.com.br).

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configurational and contingent models. The configurational model examines how a pattern of numerous practices of HRM is related to organizational performance, in a way that the whole effect from HRM is greater than the sum of individual practices [1], [16], [17]. This perspective requires solid policies and practices of HRM in the entire organization that make people work aligned and not against each other. The model proposes that a specific combination of HRM practices can generate high performance in business as long as they are in accordance to the organizational context [18], in which the optimization of the structure will change with contingent factors. To be effective, an organization must adapt its structure to both contingent and environment factors [19]. In this sense, application of HRM practices may not always have the same effect over organizational performance, since this one changes according to contingent factors [13]-[20]. Among others, company's strategy is the moderating factor more extensively analyzed in studies relating HRM practices and organizational performance [14]. This notion is strongly influenced by the logic of the HPWS, which emphasizes the alignment of HRM practices in a way that ensures that the company gains synergy associated with the deployment of an additional set of HRM practices, instead of isolated and disarticulated practices [4]-[6]. According to [21, p. 56], "isolated practices have a limited capacity to generate competitive advantage". However, if those conditions are offered, one could expect that this could help increase organizational performance. But what kind of performance should be affected by these practices? There are an extensive set of indicators being studied by researchers. Reference [7] proposed four performance dimensions that are affected by HRM: HR Results, Organizational Results, Financial and Investment Results, and Capital market results. Table I presents some of those performance indicators along with the studies that adopted them.

TABLE I
ORGANIZATIONAL PERFORMANCE DIMENSION AND THEIR INDICATORS

| Performance Dimension | Indicators | Authors |
|---|---|---|
| HR Results | Absenteeism<br>Organizational Citizenship<br>Commitment<br>Individual Performance<br>Attitudinal and behavioral impacts<br>Involvement<br>KSA (Knowledge, Skill, Ability)<br>Satisfaction and Motivation<br>Turnover (voluntary and / or involuntary) | [6], [7], [17], [22]-[25]. |
| Organizational Results | Organizational Innovation and new product development<br>Efficiency Improvement<br>Quality Improvement<br>Labor productivity<br>Customer satisfaction | [6], [7], [17], [22]-[25]. |
| Financial and Investment Results | Profitability or profitability accounting<br>Market Share<br>Return on investment (ROI)<br>Return on Equity (ROE)<br>Growth | [7], [11], [16], [17], [22]-[24]. |
| Capital Market Valuation Results | Market-to-book value<br>Price Earnings Ratio<br>Q –Tobin | [7], [17], [22]-[24]. |

In the present study, we will examine the HRWS impact over two majors financial (investment) and capital market (valuation) indicators, respectively represented by Return on invested capital (ROIC) and Price earnings ratio (PER). Succinctly speaking, for a given firm, ROIC is computed by dividing net income on total capital, and PER is the ratio of market share price to earnings per share. On one hand, ROIC is based on a company's financial statements information and shows how efficiently capital is used to generate revenues; on the other hand, in line with the efficient market hypothesis, which asserts that the stock price reflects all public information about the firm [26], PER indicates market assessment of firm value. Moreover, according to the balanced scorecard framework, there is a causal relationship link between the perspectives: learning and growth perspective drive internal process perspective, which affects customer perspective, resulting in better financial and capital market indicators. One may argue that there is a long chain between HRM practices and financial or capital market indicators, so the HRM's practice effects dilute in their way to the financial results. Yet this is true, we suppose that there remains some sort of impact, and our aim is to appraise and to investigate one variable that can influence it: the Person-Environment Fit.

Person-Environment Fit (PE Fit). The effectiveness of HRM practices on Organization Performance can be influenced by contingent factors like employees' perception about work environment [13]-[20]. Reference [27] proposed that the interaction between the person and his work environment will lead to a specific behaviour and when the person's perception is positive, s/he tends to show a positive behaviour. According to [28] show that people's behaviour would be a function of their interaction with the environment, and that one aspect of this relationship would be the degree to which the individual adjusts to the situation. This theory

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predicts that the perception of alignment between the person and the environment is beneficial to physical and mental well-being and, on the other hand, a perceived incompatibility means stress, physical and mental tension (i.e. damage to the well-being) and stimulates the misfit between Person and Environment.

The alignment between person and environment incorporates two basic dimensions [28]. The first alignment refers to objective and subjective perceptions. Objective perceptions refer to attributes – physical and social situations and events – that exist independently of a person's perception, whereas the subjective perception refer to a person's subjective perception of situations and events experienced by him/her. According to [29, p.171], subjective perception permeates the perception of organizational reciprocity as a "set of beliefs about the retributive style adopted by the company in the light of the contributions offered by its employees".

The second alignment involves the adjustment between people's values and the available sources to satisfy them [30]. People's values refer to their wishes and, therefore, mean a general construction that presumes interests, preferences and goals. The sources refer to environment aspects that can meet the person's values [31].

The PE Fit must have certain degree of correspondence, and so they proposed a complementary and supplementary adjustment. In the complementary adjustment, the basis is the search for a pattern of relevant characteristics for adaptability between person and environment [9]- [32], like people's skills required to meet environmental requirements (alignment demands-abilities). These include availability for travelling, week work time, commitment, abilities and energy that the person can gather to meet the organization's demands. Author [9] expanded the definition of complementary alignment to include people's needs, wishes and preferences offered by environmental sources (alignment needs-supplies), like financial, psychological or physical resources or opportunities related to the task, interpersonal or growth. Thus, the complementary needs-supplies adjustment occurs when the people's characteristics "fill a gap in the current environment or vice versa". The Best Fit occurs when the individual and the environment are similar; then people will share a common proposition and will have positive behaviour at work.

The supplementary adjustment refers to the alignment between fundamental characteristics of an organization and an individual. The organization's characteristics usually include culture, mood, values, goals and standards; whereas the most studied individual's characteristics are values, objectives, personality and attitudes. Thus, there is a supplementary alignment between organization and individual when there is a similarity in those characteristics, mainly the congruence between an individual's and an organization's values [32]. So, there is PE Fit when (a) an entity promotes what other entity needs (complementary alignment); (b) they share fundamental characteristics (supplementary alignment); (c) both alternatives [9].

### *A. Person-Supervisor Fit (PS Fit)*

Some researches use the term Leader-Member Exchange (LMX) to refer to PS Fit. The theory of LMX was proposed by [33] meaning a person who plays a role of leadership and influence without formal authority exercise. To make it happen, the leader gives more information to the team members, delegates more, enriches tasks and responsibilities of the subordinates, increases their role in greater levels of decisions, gives raises and rewards among other benefits. On the other hand, the subordinates assume more obligations, commit themselves with the tasks, become more loyal and share responsibilities and duties with their leaders.

The main contribution of the LMX to the trust system is the notion of the two-way relation of the leader and his/her subordinates. These relations are evidenced by the roles developed by subordinates when negotiating with their leader [34]. The emphasis is on the trust's relationship that is developed between leaders and followers. Authors [35] identified three dimensions in the building of the leader-member exchange: (a) the leader's perception of contribution in terms of work quality and orientation towards mutual objectives; (b) loyalty, based in the expression of mutual support to the objectives; (c) mutual affection between leader and team member based mainly in the interpersonal attraction instead of working or professional values. Presumably, HRM practices may also influence LMX, as this sort of practices may promote leaders' development and provide tools for them to exercise their leadership with their teams.

### *B. Person-Group Fit (PG Fit)*

The PG Fit is defined most broadly as "the compatibility between individuals and their workgroups" [9, p.7]. Cohesion between individuals and group means that members are attracted to the group's objectives [34]. According to [36], for the cohesion to exist, interpersonal attraction is necessary, but not sufficient. What is necessary is the desire to pursue common goals.

To develop a degree of cohesion in group, [37] found sub-factors: congruence between group's members; adoption of common goals; achievement of group's satisfaction trough meeting of these goals. The PG Fit points to these objectives, values, personality traits and sharing in working environment, which guides to better results.

### *C. Person-Organization Fit (PO Fit)*

PO Fit reflects the rate of compatibility between individual and organization and accesses similarities through characteristics that are present both in the organization and individual, whose degree of proximity may vary, being very close or opposed [9]. Researches about the PO Fit emphasize the need of adjustment between people, goals and organizational values. The debate between personal and situational perspectives points that attitudes and behaviour in organizations are a result of complex interaction between individual's characteristics and organizational context's aspects [38], in which the congruence between personal and organizational values [9]-[38] are desirable to both individual

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and organization. The lower the perceived match between individual and organizational values at entry, the more likely it is that the employee will leave the organization over time [39].

*D.Person-Job Fit (PJ Fit)*

PJ Fit is based on the relations between a person's and his/her task's characteristics [40]. It seeks to highlight the differences between what people expect to get through work and what they actually get. The lack of alignment is associated with negative attitudes regarding the job [41].

Researches made after Edwards' studies have been corroborating these observations [51], indicating that effects of the PJ discrepancy are also associated with increased anxiety, depression and irritation of individuals. Author [41] outlined two basic concepts of PJ Fit. The first one is the fit between demands and skills, in which are established parameters of knowledge, skills and capacities of workers to perform the job. The second kind of alignment occurs when workers' needs, desires or preferences are met by their functions, providing well-being and satisfaction of the employee [30].

It is arguably possible to presume that PE Fit and its components play a role in the relationship between HRM practices and financial and capital market results. According to that rationale, the more complex HRM practices a firm has, the better its financial and capital results. Companies with better practices will obtain engagement (SET), better teamwork (and interdisciplinary work) and skilled employees through training and development initiatives, who will improve organizational performance indicators and, consequently, this will feature in financial statements. These last ones will influence capital market perceptions and will show up in market indicators like PER. Moreover, if a company has a positive PE Fit in all its components, this can leverage HRM effects. Firms with higher employee engagement will recognize and appreciate more the HRM efforts towards them; consequently, they will respond (or correspond) to achieve higher performance with an impact on firm's finance. Seeing it from the opposite side, for companies with low PE Fit, even the best effort on improving HRM practices will be seen with distrust, and probably will have low impact on employee performance. Therefore, we can expect an interaction between HRM practices and PE Fit (in its diverse components), in a sense of moderation, i.e. firms with higher levels of HRM practices (or HPWS) with better PE Fit will achieve better results. This reasoning is in accordance with [42] who pointed that most research to date has approached PE Fit as a static phenomenon, and without examining how different types of PE Fit may interact with HRM practices and performance. In particular, little is known about the conditions under which fit with one aspect of the environment influences another aspect, as well as subsequent performance. We can explore further these ideas for each of the PE Fit components in order to formulate our hypothesis. For instance, the PS Fit has a leverage effect through the LMX theory, which means the way leaders deal with employees will impact results. This is true if we consider that HRM practices are brought through by leaders: they are the ones who absorb, apply and attribute to HRM practices [43]. Reference [42] agreed with this idea reporting that a good relationship with one's supervisor may strengthen the relationship between different types of fit over time. Therefore, we propose our first hypotheses.

*Hypothesis 1. The Person-Supervisor Fit (PS Fit) moderates the relationship between HR management practices and financial performance.*

By financial performance, to make it short, we propose two tests, both for financial results and capital market results, assuming they are linked to some degree: good financial statements reported will lead to firm's stock market growth. We will carry that idea to another hypothesis.

Authors [44, p. 264] wrote, "Person-Group Fit is best conceptualized as the congruence or alignment between a combined set of team elements that produces a relatively higher level of team effectiveness". Studies support a positive relationship between group-level fit perceptions and group-level outcomes. Perceived group fit showed moderately strong associations with leader-rated group performance, unlike individual-level PG Fit, which has repeatedly been found to have minimal impact on individuals' task performance [40]. Authors [45] suggest high levels of individual performance promote increases in PG Fit. In combination with the presence of appropriate HRM practices, this can leverage financial performance; that is proposed in our second hypothesis:

*Hypothesis 2. The Person-Group Fit (PG Fit) moderates the relationship between HR management practices and financial performance.*

Our third hypothesis examines how the alignment between employee and organization interacts with HRM practices and financial performance. According to [22], when an employee is committed to a company's values, favorable HRM practices reinforce that perception generating even bigger engagement, and consequently, better performance, that is subsequently transmitted to financial performance. On the contrary, unfavorable perceptions can reverse even positive HRM practices, which will be viewed then with distrust. That effect was observed by [46]: individuals report better outcomes when there is fit with organization on attributes they rate as highest, and they report lower outcomes when the organization offers less than they need or desire.

*Hypothesis 3. The Person-Organization Fit (PO Fit) moderates the relationship between HR management practices and financial performance.*

Finally, when an employee is satisfied with his/ her job, that fact exerts positive influence over performance [47]. If applied together with positive HRM practices, impact can be multiplied in terms of individual, organizational and financial performance. As observed by [48] on their study, HRM practices and good job fit are positive predictors for job satisfaction and employee performance.

*Hypothesis 4. The Person-Job Fit (PJ Fit) moderates the relationship between HR management practices and financial performance.*

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## III. Methodology

To examine the moderator effect of the PE Fit in the relation between HRM practices and financial performance, we investigate the "500 Best Companies to Work for" in Brazil. This is an annual survey administered by the Fundação Instituto de Administração (Institute of Management Foundation), related to the University of São Paulo. This survey happens annually since 2006; the data considered is from 2010, published in 2011. This data were taken because, as will be detailed ahead, we had to consider simultaneously two data sets involving HRM practices and financial and capital market results, achieving the highest number of companies presented in both lists in order to have relevant cases for statistical analysis.

This survey consists of two groups of questions: one regarding HRM practices, which is addressed the HR manager; and the other referring to PE Fit, administered to a sample of the companies' employees. Data collection starts with an invitation to companies to take part in the research, using advertisements in business magazines, newspapers or emails. As it is a sort of traditional survey and the results are published in the mass media, it is not hard to achieve companies' interest and adhesion. Examining HRM practices and its results through employee's opinions, a first selection is made to choose the 500 best companies. The criteria involve the reported sophistication level of HRM practices and employee's answers – the better they are, the higher the firm's position in the ranking. The chosen companies are then visited by a group of researchers to know, *in loco*, the real functioning of these practices. Then some adjustment and rakings are made in order to choose the best ones. Despite the scientific procedure implemented here, it is important to mention that this ranking would suffer from the selection bias. Indeed, only the companies that accepted to take part in the survey are subject to the ranking.

For the purposes of this research, we were interested in investigating the impact of HRM practices over financial performance, moderated by PE Fit. We also need to gather financial data. We opt to use published data from public companies, a condition that were met by 33 of the companies listed in the survey.

The average sales of the 33 companies are US$ 2.2 billion. The company with lowest revenues earned US$ 232 million in 2010 and the one with the biggest revenues earned US$ 13.51 billion.

The questionnaire answered by the HR manager dealt with HRM practices in the organization. It was composed of statements like: "The company adopts formal mechanisms so that employees are informed about their career possibilities and a career plan is structured, formalized and practiced". The possible answers were stratified according to organizational level or "pipeline" (directors, managers and other employees) and ranged from "not at all" or "partially" to "everyone". Answers were coded according to the example in Table II.

The rationale behind this was that the degree of sophistication of each practice could be expressed in a zero to 10 scale, with zero meaning the inexistence of the practice (or a practice that is not applied to any of the groups of directors, managers and employees) and 10 indicating a whole application of the practice in all the organizational levels. A company that adopts certain practice to all its directors, some of its managers and some of its supervisors would sum up 3 + 1.5 + 2 = 6.5 points. Higher scores are attributed to the rest of the employees because usually they are the biggest group in the sampled companies, even bigger than the sum of the previous groups, and therefore the application of HRM practices to this group tends to be more complex.

TABLE II
Coding Scheme Example

| Category | Level | Scope | Score |
|---|---|---|---|
| The company adopts formal mechanisms so that employees are informed about their career possibilities and a career plan is structured, formalized and practiced. | Directors | Not at all | 0 |
| | | Everyone | 3 |
| | | Partially | 1.5 |
| | Managers | Not at all | 0 |
| | | Everyone | 3 |
| | | Partially | 1.5 |
| | Other employees | Not at all | 0 |
| | | Everyone | 4 |
| | | Partially | 2 |
| Max | | | 10 |

After coding those answers for selected companies, a descriptive analysis, Pearson correlation, factorial and alpha of Cronbach were done. The final constructs of the HRM Practices presented Kaiser-Meyer-Olkin-KMO = 0.743; sphericity of Bartlett $X^2 = 189{,}270$ and $p < 0.001$, confirming the validity of the factorial analysis. After eliminating some variables due to kurtosis and asymmetry problems, the factors were called Practices of career support, Practices towards health and welfare, and Practices of professional evaluation. On the other hand, questions applied to employees were answered by 26,469 respondents to evaluate PE Fit in the sampled companies. The questionnaire was composed by 64 questions related to the employee's perception of the company. The questions could be answered in a five-point Likert scale, from 1 (totally disagree) to 5 (totally agree). The confirmatory factor analysis of the indicators of PE Fit pointed four factors, PS Fit, PG Fit, PO Fit, PJ Fit in accordance with literature on PE Fit construct [40]. All the statistics measures were relevant (KMO = 0.951; Bartlett $X^2 = 238{,}156.5$ and $p < 0.001$).

Considering the financial indicators, we adopt the moderation analysis. To test formulated hypotheses, we have implemented following linear regression models.

Model 1 and model 2 tackle the question of HRM practices impact on financial performance indicators as well as moderation effect of PE Fit in the presence of control variables:

$$X_i = a + bVI_i + cY_i + \gamma S_i + \theta P_i + \varepsilon_i \quad (1)$$

$$X_i = a + bVI_i + cY_i + d(VI_i \times Y_i) + \gamma S_i + \theta P_i + \varepsilon_i \quad (2)$$

where dependent variable X represents financial performance

indicators (ROIC and PER), focal variable VI is HRM practices, Y proxies moderator variables (PS Fit (MOD1), PG Fit (MOD2), PO Fit (MOD3) and PJ Fit (MOD4)) and finally, the product of focal and moderator variables (VI*Y) is added to model 2. In both models, S and P are control variables for respectively, market value and income of companies, and ε represents regressions' residuals which are assumed, on average, to be equal to zero and have a constant variance.

Concerning interpretation of the coefficients in model 1, *b* estimates the expected difference in X when VI changes by a single unit at a specific level of Y (namely Y=0). However, in model 2, *d* estimates how many units the effect of VI on X changes as Y changes by one unit. Therefore, the significance of *d* is the core subject in interaction analysis.

## IV. Results And Discussions of the Data

Tables III-VI present the statistics for model 1 and model 2. This indicates that efforts made to improve HRM practices and better PE Fit do not imply better ROIC performance or, to say it another way, ROIC is not a good translation for efforts to improve HRM practices and PE Fit variables.

TABLE III
OLS Regressions Estimating Financial Performance Proxies From HR Practice, PS Fit (Mod1) And Their Interaction

| | Return on invested capital (ROIC) | | | | Price earnings ratio (PER)[a] | | | |
|---|---|---|---|---|---|---|---|---|
| | Model 1 | | Model 2 | | Model 1 | | Model 2 | |
| Independent variables | Coefficient | Std-Error | Coefficient | Std-Error | Coefficient | Std-Error | Coefficient | Std-Error |
| a: Constant | -99.19 | 63.05 | -165.41 | 240.56 | 105.66*** | 34.22 | 272.91** | 126.41 |
| b: Human resource practice (VI) | -1.01 | 1.71 | 9.41 | 36.49 | -0.50 | 0.92 | -26.80 | 19.17 |
| c: Person-Supervisor Fit (MOD1) | 16.93 | 12.91 | 33.73 | 60.26 | -1.52 | 7.01 | -43.95 | 31.67 |
| d: VI * MOD1 | | | -2.56 | 8.98 | | | 6.48 | 4.72 |
| Control variables: γ: Market value (S, in logarithm) | -3.15 | 3.38 | -3.18 | 3.44 | 11.11*** | 1.83 | 11.16*** | 1.81 |
| θ: Pre-tax Income (P, in logarithm) | 6.17 | 4.72 | 6.06 | 4.82 | -12.77*** | 2.56 | -12.49*** | 2.53 |
| F-statistics | 0.91 | | 0.72 | | 12.10*** | | 10.37*** | |
| $R^2$ | 0,115 | | 0,117 | | 0,633 | | 0,657 | |

[a]Note: ** and *** indicate significance of coefficients as well as F-statistics at the 5% and 1%, respectively.

TABLE IV
OLS Regressions Estimating Financial Performance Proxies From HR Practice, PG Fit (Mod2) And Their Interaction

| | Return on invested capital (ROIC) | | | | Price earnings ratio (PER)[a] | | | |
|---|---|---|---|---|---|---|---|---|
| | Model 1 | | Model 2 | | Model 1 | | Model 2 | |
| Independent variables | Coefficient | Std-Error | Coefficient | Std-Error | Coefficient | Std-Error | Coefficient | Std-Error |
| a: Constant | -75.17 | 63.95 | -366.11 | 276.59 | 97.44*** | 34.11 | 213.07 | 148.97 |
| b: Human resource practice (VI) | -0.92 | 1.74 | 43.61 | 41.23 | -0.54 | 0.93 | -18.24 | 22.21 |
| c: Person-Group Fit (MOD2) | 11.81 | 14.31 | 86.03 | 70.13 | 0.64 | 7.63 | -28.85 | 37.77 |
| d: VI * MOD2 | | | -11.23 | 10.39 | | | 4.46 | 5.60 |
| Control variables: γ: Market value (S, in logarithm) | -3.01 | 3.46 | -3.19 | 3.46 | 11.01*** | 1.85 | 11.08*** | 1.86 |
| θ: Pre-tax Income (P, in logarithm) | 5.83 | 4.81 | 5.78 | 4.78 | -12.74*** | 2.56 | -12.71*** | 2.57 |
| F-statistics | 0.63 | | 0.74 | | 12.08*** | | 9.66*** | |
| $R^2$ | 0.083 | | 0.121 | | 0.633 | | 0.641 | |

[a]Note: *** indicate significance of coefficients as well as F-statistics at the 5% and 1%, respectively.

TABLE V
OLS Regressions Estimating Financial Performance Proxies From HR Practice, PO Fit (Mod3) And Their Interaction

| | Return on invested capital (ROIC) | | | | Price earnings ratio (PER)[a] | | | |
|---|---|---|---|---|---|---|---|---|
| | Model 1 | | Model 2 | | Model 1 | | Model 2 | |
| Independent variables | Coefficient | Std-Error | Coefficient | Std-Error | Coefficient | Std-Error | Coefficient | Std-Error |
| a: Constant | -61.01 | 77.19 | -150.73 | 388.09 | 125.73*** | 40.42 | 506.36** | 189.17 |
| b: Human resource practice (VI) | -0.76 | 1.74 | 14.33 | 63.96 | -0.48 | 0.91 | -64.52** | 31.18 |
| c: Person-Organization Fit (MOD3) | 7.03 | 16.87 | 28.08 | 90.81 | -6.59 | 8.83 | -95.91** | 44.26 |
| d: VI * MOD3 | | | -3.41 | 14.46 | | | 14.48** | 7.05 |
| Control variables: γ: Market value (S, in logarithm) | -2.28 | 3.46 | -2.04 | 3.67 | 10.86*** | 1.81 | 9.84*** | 1.79 |
| θ: Pre-tax Income (P, in logarithm) | 5.47 | 4.91 | 5.09 | 5.24 | -12.44*** | 2.56 | -10.83*** | 2.55 |
| F-statistics | 0.49 | | 0.39 | | 12.45*** | | 11.95 | |
| $R^2$ | 0.066 | | 0.068 | | 0.641 | | 0.688 | |

[a]Note: ** and *** indicate significance of coefficients as well as F-statistics at the 5% and 1%, respectively.

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TABLE VI
OLS REGRESSIONS ESTIMATING FINANCIAL PERFORMANCE PROXIES FROM HR PRACTICE, PJ FIT (MOD4) AND THEIR INTERACTION

| | Return on invested capital (ROIC) | | | | Price earnings ratio (PER)[a] | | | |
|---|---|---|---|---|---|---|---|---|
| | Model 1 | | Model 2 | | Model 1 | | Model 2 | |
| Independent variables | Coefficient | Std-Error | Coefficient | Std-Error | Coefficient | Std-Error | Coefficient | Std-Error |
| a: Constant | -58.29 | 42.08 | -108.95 | 109.71 | 104.59*** | 22.83 | 235.82*** | 53.14 |
| b: Human resource practice (VI) | -0.42 | 1.71 | 8.98 | 18.83 | -0.59 | 0.92 | -24.94** | 9.12 |
| c: Person-Job Fit (MOD4) | 10.77 | 7.78 | 26.52 | 32.41 | -2.09 | 4.22 | -42.89** | 15.69 |
| d: VI * MOD4 | | | -2.48 | 4.96 | | | 6.44** | 2.41 |
| Control variables: γ: Market value (S, in logarithm) | -1.28 | 3.44 | -0.48 | 3.84 | 10.81*** | 1.86 | 8.73*** | 1.86 |
| θ: Pre-tax Income (P, in logarithm) | 3.95 | 4.88 | 2.81 | 5.45 | -12.38*** | 2.64 | -9.42*** | 2.64 |
| F-statistics | 0.96 | | 1.13 | | 12.24*** | | 13.39*** | |
| $R^2$ | 0.121 | | 0.104 | | 0.636 | | 0.712 | |

[a]Note: ** and *** indicate significance of coefficients as well as F-statistics at the 5% and 1%, respectively.

Price-earnings ratio (PER) showed significant results, if not for all PE Fit variables, then at least to some of them; for instance, in model 1, HRM practices proved not to be related to PER when the moderation effect of the PE Fit is absent.

The moderation model (model 2) does not match with variables PS Fit and PG Fit (H1 and H2 are rejected). It seems these variables are of a more personal nature and are not transferred to the market perceptions of their results. Therefore, if employees like their leaders or peers in those firms, it did not interfere with market perceptions about the company.

Notwithstanding, the same moderation model (model 2) proved to be adapted to PO Fit and PJ Fit (Tables V and VI), where all variables are significant at least at 5% level, keeping similar pattern in both regressions, in support of H3 and H4. The HRM practices had a negative sign. To analyze this result, it is important to consider the nature of PER. Lower PER indicates a firm offers better earnings for a given stock's price. In comparative analysis, the lower the PER, the higher is analysts' appreciation about stocks performance. Following the shareholder value principle, a company must maximize returns on shareholders' investments; consequently, every investment in HRM practices demands justification from a shareholder perspective. Moreover, according to signaling theory investors also respond to firm's decisions by investing in stock if they foresee potential [49]. That is, information on investments in HRM practices influence analysts' forecast accuracy. Hence PER measure points to how the market perceives the firm from public news about the company – as the information about the level of HRM practices. So, when a company is known for its sophistication in adoption of HRM practices, this fact is priced by the market in its stocks' value; as such, those companies are performing well and offer good returns for the price paid on them. Moreover, an additional contribution of the paper to the literature is that a fair assessment of company's HR investments is exhibited by stock market indicators (i.e. PER). As can be seen in Tables V and VI, HRM practices and PO Fit (PJ Fit) do interact with $d$=14.48 (6.44) and $p<.05$. It means that the effect of HRM practices on price-earnings ratio depends on the level of PO Fit (and PJ Fit) in the company. In other word, a unit change in moderator variable, i.e. PO Fit (PJ Fit), increases the effect of HRM practices on performance, i.e. PER, in 14.48 (6.44) units. Besides, we can drive from *c* that among companies which have no complex HRM practices (i.e. *VI*=0), a unit increase in PO Fit (PJ Fit) is predicted to lower the PER ratio as 95.91 (42.89) units. We can also claim from *b* that for companies in which PO Fit (PJ Fit) is very low - i.e. MOD3 (MOD4) nearby zero- one unit change in the HRM practices complexity estimates to decrease PER as 64.52 (24.94). Therefore, market values a stock when the firm is perceived as a place where employees are proud to work and have their skills matches with the right tasks with the assistance of good HRM practices. Moreover, these results about moderator effect indicate that a firm with modern HRM practices and a good fit between employee, organization and their job is perceived as a potential future investment.

HRM practices and PO Fit (PJ Fit) interact in a positive way. That means the moderation increases PER in an opposite way to HRM and Person-Fit variables separately taken. Again, we must look to PER's nature. If lower PER indicates an interesting investment on a shareholder perspective, higher PER points to greater expectations about firm's future. So, to a certain degree, maybe this positive interaction reminds the fact that those companies not only offer good returns today but may point to sustainable earnings in future. This result may be in accordance with [50] about the financialized economy, through which "the extraction and realization of value was driven by the requirement of capital market, subordinating conventional product market competition". In other words, being a good firm to work for is a way to show employee attractiveness but also a signal to investors as to the sustainability of its financial performance.

## V. CONCLUSION

This paper investigates the moderation effect between HRM practices and financial performance. As a theoretical reference, we consider the ideas on High Performance Working Systems (HPWS), focusing mainly on the contingent school that affirms some variables should be considered when evaluating the impact of HRM practices over financial performance. Observing the gap in the literature, we studied the PE Fit as a possible moderator in the relationship between HRM practices and performance. As a proxy for financial

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performance, we took Return over invested capital (ROIC) and Price-earnings ratio (PER).

We considered a sample of the "best companies for one to work" in Brazil. Starting from a list of 500 companies, we got 33 who matched our criteria of having both HRM practices, employees' answers (25,469 in total) and financial performance available. The data were factor analyzed to be reduced for both in HRM practices (with three variables: practices of career support, practices towards health and welfare, and practices of professional evaluation) and PE Fit (with four variables, matching the dimensions pointed in literature: PS Fit, PG Fit, PO Fit PJ Fit).

Those data were submitted to linear regression analysis to test a moderation relationship between HRM practices, PE Fit and financial performance, and some meaningful results were found. First, no significant results were found for ROIC; this means that financial indicators coming purely from the company's financial statements could not exhibit the impact of HR investments. Second, results showed a negative correlation between PER and HRM practices: the better HRM practices, the lower the PER. As PER relates to the ability of the company to generate good returns for the price of its stocks, we suggest firms with better HRM practices offer interesting returns for its share prices.

Another result was the moderation effect between HRM practices and PER, apprehended for both PO Fit and PJ Fit – but not captured for PS Fit or PG Fit. For the first, while both HRM practices and Person Fit variables were negatively associated with PER, the moderation was positively correlated. We suggest that, though those companies generate interesting returns, they still have potential to grow their stock's prices as the HRM practices interacts with Person Fit variables (Organization and Job) to stimulate increases in PER. The absence of relationship with PS and PG can be interpreted due to the personal nature of these measures, which means the relationships one has with their boss and peers are not being transferred to performance in terms of PER or ROIC.

Though the study of moderation on HRM practices is not new, the literature has focused on variables like company's strategy and size, with studies emphasizing PE Fit being scarcer. The review of previous studies did not reveal moderation between HRM practices and PE Fit. Future studies can go deeper into this analysis, increasing the sample or considering another sample from other countries, or even rechecking the stability of these results over time in longitudinal studies through panel data.

## REFERENCES

[1] J. Chowhan, "Unpacking the black box: understanding the relationship between strategy, HRM practices, innovation and organisational performance." *Human Resource Management Journal,* vol. 26, pp. 112-133, 2016.

[2] N. Fu *et al.*, "How do high performance work systems influence organisational innovation in professional service firms?" *Employee Relations*, vol. 37, pp. 693-707, 2015.

[3] J. P. Guthrie, P. C. Flood, W. Liu, and S. Maccurtain, "High performance work systems in Ireland: human resource and organizational outcomes." *International Journal of Human Resource Management*, vol. 20, no. 1, pp. 112-125, 2009.

[4] K. Van De Voorde, and S. Beijer, "The role of employee HR attributions in the relationship between high-performance work systems and employee outcomes." *Human Resource Management Journal*, vol. 25, pp. 62-78, 2015.

[5] L. Q. Wei, and C. M. Lau, "High Performance Work Systems and Performance: The Role of Adaptive Capability." *Human Relations*, vol. 63, no. 10, pp. 1487-1511, 2010.

[6] J. P. Macduffie, "Human Resource Bundles and Manufacturing Performance: Organisational Logic and Flexible Production Systems in the World Auto Industry." *Industrial and Labour Relations Review,* vol. 48, no. 2, pp. 197-221, 1995.

[7] E. W. Rogers, and P. M. Wright, "Measuring organizational performance in strategic human resource management: Problems, prospects, and performance information markets." *Human Resource Management Review*, vol. 8, no. 3, pp. 311-331, 1998.

[8] R. Kaplan, and D. Norton, "The Balanced Scorecard-Measures that drive performance." *Harvard Business Review*, vol. 72, no. 1, pp. 71-79, 1992.

[9] A. L. Kristof, "Person-organization Fit: An integrative review of its conceptualizations, measurement, and implications." *Personnel Psychology*, vol. 49, no. 1, pp. 1-49, 1996.

[10] R. Cropanzano, and M. S. Mitchell, "Social Exchange Theory: An interdisciplinary review." *Journal of Management,* vol. 31, no. 6, pp. 874-900, 2005.

[11] M. Huselid, "Impact of human resource management on turnover, productivity and corporate financial performance." *Academy of Management Journal*, vol. 38, no. 3, pp. 635-672, 1995.

[12] J. Purcell, "Best practice and best fit: Chimera or cul-de-sac?" *Human Resource Management Journal*, vol. 9, no. 3, pp. 26-41, 1999.

[13] M. A Youndt, S. A. Snell, J. W. Dean, and D. P. Lepak, "Human resources management, manufacturing strategy, and firm performance." *Academy of Management Journal,* vol. 39, no. 4, pp. 836-866, 1996.

[14] P. Boxall, and J. Purcell, *"Strategy and Human Resource Management."* London: Palgrave, p. 368, 2003.

[15] B. E. Becker, and M. A. Huselid, "Strategic Human Resource Management: where do we go from here?" *Journal of Management*, v. 32, pp. 898–925, 2006.

[16] J. E. Delery, and D. H. Doty, "Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions." *Academy of Management Journal,* vol. 39, pp. 802-835, 1996.

[17] H. Do, "*High-Performance Work Systems and Organisational Performance: evidence from the Vietnamese Service Sector"*, Doctor of Philosophy Aston University June 2016.

[18] R. Miles, and C. Snow, *"Fit, failure, and the hall of fame."* New York: Free Press, 1984.

[19] L. Donaldson, Teoria da contingência estrutural. In "*Handbook de Estudos Organizacionais: modelos de análise e novas questões em estudos organizacionais."* S. Clegg, C. Hardy and W. R. Nord, São Paulo: Atlas, 1999.

[20] D. P. Lepak, and S. A. Snell, "Examining the Human Resource Architecture: The Relationships among Human Capital, Employment, and Human Resource Configurations." *Journal of Management,* vol. 28, pp. 517-543, 2002.

[21] J. B. Barney, "Looking inside competitive advantage." *Academy of Management Executive*, vol.17, no.4, pp. 49-61, 1995.

[22] A. M. Ayanda, O. R. Lawal, and P. Ben-Bernard, "Effects of Human Resource Management practices on Financial Performance of banks." *Transnational Journal of Science and Technology*, vol. 4, no.2, pp. 1-16, April 2014.

[23] L. Dyer, and T. Reeves, "Human resource strategies and firm performance: What do we need to know and where do we need to go?" *International Journal of Human Resource Management*, vol. 6, pp. 656-670, 1995.

[24] A. M. B. Oliveira, and A. J. Oliveira, "Gestão de Recursos Humanos: Uma metanálise de seus efeitos sobre desempenho organizacional." *Revista de Administração Contemporânea*, vol. 15, no. 4, pp. 650-669, 2011.

[25] S. Selden, L. Schimmoeller, and R. Thompson, "The influence of high Performance Work Systems on voluntary turnover of new hires in US state governments." *Personnel Review*, vol. 42, pp. 300-323, 2013.

[26] E. F. Fama, L. Fisher, M. C. Jensen, and R. Roll, "The adjustment of stock prices to new information." *International Economic Review*, vol. 10, pp. 1-21, 1969.

[27] K. Lewin, "*Dynamic theory of Personality*." New York: McGraw-Hill,

1935.
[28] J. R. Edwards, and C. L. Cooper, "The Person-Environment Fit approach to stress: Recurring problems and suggested solutions." *Journal of Organizational Behavior*, vol. 11, pp. 293-307, 1990.
[29] M. M. M. Siqueira, "Proposição e análise de um modelo para comportamentos de cidadania organizacional." *Revista de Administração Contemporânea*, vol. 7, pp. 5-184, 2003.
[30] E. A. Locke, The nature and causes of job satisfaction. In. "*Handbook of industrial and organizational psychology."* M. Dunnette, Eds. Chicago: Rand McNally, 1976, pp. 1297–1350.
[31] J. R. P. French, R. D. Caplan, and R. V. Harrison, *"Mechanisms of job stress and strain.*" Chichester: Wiley & Sons, 1982.
[32] P. M. Muchinsky, and C. J. Monahan, "What is Person-Environment congruence? Suplementary versus complementary models of Fit." *Journal of Vocational Behavior*, vol. 31, pp. 268-277, 1987.
[33] F. Dansereau, J. Cashman, and G. Graen, "Instrumentality theory and equity theory as complementary approaches in predicting the relationship of leadership and turnover among managers." *Organizational Behavior and Human Performance*, vol. 10, pp. 184-200, 1973.
[34] J. B. Vancouver, and N. W. Schmitt, "An exploratory examination of person- organization fit: Organizational goal congruence." *Personnel Psychology*, vol. 44, pp. 333-352, 1991.
[35] R. M. Dienesch, and R. C. Liden, "Leader-member exchange model of leadership: A critique and further development." *Academy of Management Review*, vol. 11, pp. 618-634, 1986.
[36] A. V. Carron, "Cohesiveness in sport groups: Interpretations and considerations." *Journal of Sport Psychology*, vol. 4, pp. 123-138, 1982.
[37] D. Yukelson, R. Weinberg, and A. Jackson, "A multidimensional group cohesion instrument for intercollegiate basketball." *Journal of Sport Psychology*, vol. 6, pp. 103-117. 1984.
[38] M. Tepeci, "*The Effect of Personal Values, Organization Culture, and Person-organization Fit on Individual Outcomes in the Restaurant, Industry*." Unpublished Doctoral Dissertation, Pensylvania: State University, 2001.
[39] R. Decooman *et al.,* "Person-Organization Fit: Testing socialization and attraction-selection-attrition hypotheses." *Journal of Vocational Behavior,* vol. 74, no. 1, pp. 102-107, 2009.
[40] A. L. Kristof-Brown, R. D. Zimmerman, and E. C. Johnson, "Consequences of individuals fit at work: a meta-analysis of Person-Job, Person-Organization, Person-Group, and Person-Supervisor Fit." *Personnel Psychology*, vol. 58, pp. 281-342, 2005.
[41] J. R. Edwards, Person-Job Fit: A conceptual integration, literature review, and methodological critique. In "*International review of industrial and organizational psychology*", C. L. Cooper, and I. T. Robertson Eds., vol. 6, pp. 283-357, 1991.
[42] C. Boon, and M. Biron, "Temporal issues in Person–Organization Fit, Person–Job Fit and Turnover: The role of leader–member Exchange." *Human Relations*, vol. 69, no. 12, pp. 2177-2200, 2016.
[43] H. S. Park, and S. Y. Shin, "The role of the star player in a cohesive group." *Small Group Research*, vol. 46, pp. 415-430, 2015.
[44] D. S. Derue, and J. R. Hollenbeck, The search for internal and external fit in teams. In "*Perspectives on Organizational Fit."* C. Ostroff, and Judge, T. A Eds., New York: Lawrence Erlbaum Associates, 2007, pp. 259-285.
[45] D. S. Derue, and F. P. Morgeson, "Stability and change in person-team and Person-Role Fit over time: The effects of growth satisfaction, performance, and general self-efficacy." *Journal of Applied Psychology***,** vol. 92, pp. 1242-1253, 2007.
[46] A. E. M. V. Vianen, "Person–Environment Fit: A Review of Its Basic Tenets." *Annual Review of Organizational Psychology and Organizational Behavior,* vol.5, no.1, pp.75-101, 2018.
[47] A. S. B. Shmailan, "The relationship between job satisfaction, job performance and employee engagement: An explorative study." *Business Management and Economics*, vol. 4, no. 1, pp. 1-8, 2016.
[48] N. Ahmad, and M. Jameel, "HRM practices as predictor of employee Performance and Job Satisfaction: A Study of Nespak, Pakistan." *Arabian Journal of Business and Management Review (Nigerian Chapter)*, vol. 4, no.1, 2016.
[49] P. Asquith, and D. Mullins, *Signaling with dividends, stock repurchases and equity issues. Financial Management*, vol.35, no.3, pp. 27-44, 1986.
[50] P. Thompson, "The trouble with HRM." *HR Management Journal*, vol. 21, no. 4, pp.355-367, 2011.
[51] A. Saks, and B. A. Ashforth, "Longitudinal investigation of the relationship between job information sources, applicant perceptions of fit and work outcomes." *Personnel Psychology*, vol. 50, pp. 395-426, 1997.

Open Science Index, Economics and Management Engineering Vol:13, No:3, 2019 publications.waset.org/10010126/pdf