

Human Resource Practices and Organizational Commitment: contingency factors analysis

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Abstract

The general objective of the study was to identify the relationships between HR configurations practices, contingency factors and commitment levels. A quantitative-descriptive study was conducted using univariate and multivariate technique – *cluster analysis* on a secondary data basis (150 companies and more than 60,000 respondents). It was designed a **multilevel study**, that is, at the level of the organization and also at the level of the employees who work there.

The results showed **three types of configurations of HR practices** in the sample, notably a **group of companies adopting HR practices focused on high commitment (HCWS)** - an important indicator that confirms the *contingency assumptions of HR practices*, since the sample can be considered homogeneous. The Cluster Analysis, relating to the contingency factors, found some support for the assumption that the sector of the firm – industry or service can lead to different bundles of HR Practices. On the other hand, related to the **group of companies adopting HR practices focused on high commitment (HCWS)** was not differentiated from the total sample with respect to the employees' educational profile (consider an important contingency factor for HR Practices), levels of commitment or intention to remain, which is an unexpected result, since high-commitment practices should, at least theoretically, lead to a higher level of commitment and intention to remain in this group. Avenues of future studies are addressed.

1. Main purpose of the research

The overall objective of the study was to identify the relationships between HRM practices related to high commitment, the most relevant contingency factors related to the adoption of the HCWS and the levels of commitment and intent to remain. Field research was carried out on a secondary basis (150 companies and more than 60,000 respondents), and was designed as a multilevel study, that is, at the level of the organization and also at the level of the employees who work there.

2. Theoretical Background

2.1 Organization Commitment

Studies regarding organizational commitment have widely demonstrated positive implications on turnover, the work performance, organizational citizenship behaviour and well-being of the employees. The results of the meta-analysis done by Mathieu and Zajac (1990) positively correlate organizational commitment with better work performance and low absenteeism.

According to Albuquerque and Chang Junior (2005) there are a lot of different definitions to employee commitment, permeating different areas of knowledge. Nowadays, it's proposed that *organizational commitment* has been understood as a set of beliefs and feelings towards the organization, that generate an attitudinal disposition in desirable behaviors like extra effort, defending the organization, among others. (BASTOS; RODRIGUES; PINHO, 2010). Meyer and Allen (1997) alert to the scarce knowledge about the process in development the commitment.

Currently, studies and reflections inside and outside Brazil have searched to elucidate some of the conceptual questions of organizational commitment, in order to distinguish

other kind of ties with the organization, treated before as the same (KLEIN; MOLLOY; COOPER, 2009).

Organizational commitment dimensions

For a long while, it was recurrent that organizational commitment studies adopted the three-dimensional model by Meyer and Allen (1991), composed by the *affective* dimensions (individual's identification with the organization and sharing of beliefs and values), *normative* (feeling of obligation guided in a reciprocity of a norm) and *instrumental or continuation* (need to continue on the organization justified by the material gains and to the costs associated to the way out). Even though this model is still been used by researchers, studies have discussed the overlap of the normative basis and the affective basis (Meyer *et al.*, 2002; Silva, 2009) and the empirical and conceptual discrepancy associated to the instrumental basis, which patterns points to the opposite of the other dimensions.

Nowadays, it's proposed that the organizational commitment has been understand as a set of beliefs and feelings to preserve the organization, that generate an attitudinal disposition concretized in desirable behaviours with extra effort, defending the organization, among others. (BASTOS; RODRIGUES; PINHO, 2010)

In this way, it's important to point that the concept of organizational commitment, by the tendency of new studies of the area (Bastos *et al.*, 2013), get rid of the continuation dimension and set its essence on the **affective dimension**.

The affective dimension

The affective organizational commitment refers to the ties that includes beliefs and intentions towards the organization (MATHIEU; ZAJAC, 1990). In this way, the organizational commitment, according to Trice *et. al.* (1984) represent more than passive

loyalty to an organization. It involves an active relation, in which the individual desires to give something to contribute to the organization.

According to Siqueira (2001) when the individual internalizes the values of his organization, identifying himself with his goals, it's considered that it was developed a psychological relation with the organization. This relation it's represented, in the organizational behaviour field, by the concept of affective organizational commitment, "...a state where an individual identifies himself with an particular organization and with his goals, desiring to stay in, working to realize this goals" (MOWDAY; STEERS; PORTER, 1979).

The commitment, as an construct, differs from the concept of work satisfaction, because emphasises the ties with the organization, which includes his goals and values the other hand, satisfaction emphasises appreciation with the work environment where the employee accomplish his tasks (MOWDAY; STEERS; PORTER, 1979). Meyer and Allen (1997) alert to the scarce knowledge about the process in development the commitment. In this way, stands out the importance of Human Resources Practices.

2.2.HRM, HRSM and High Commitment Work System (HCWS)

The Human Resources Management (HRM) is understand as a set of activities developed to appropriate management the workers (BOSELIE *et al*, 2005). Fischer (2002, p. 12) defines Human Resources Management (HRM) as "the way that the company organizes, operates and orientates the individual's behaviours". The HRM materializes itself by the conception and implementation of practices for his proper management.

According to Legge (1995, p. 22):

(...) HR management is select, develop, reward and drive collaborators in a way that they can obtain satisfaction and give their best and, in the moment that the do it, they permit

the organization to accomplish his goals. Also, human resources management it's an assignment of every manager not just the HM specialists.”

The Human Resources Strategic Management (HRSM) – construct proposed by Schuler (1992, p.30) involves “all the activities that affect the individual behaviour and his efforts to the formulation and realization of strategic needs to the company”. It's possible to notice that the more significant change between the definitions of HRM and HRSM reflects the importance of alignment and strategy orientation of the organization.

The definition of Human Resources Management as an ensemble of practices – as explained above, is the one that became more popular, because it establishes the formalization process of HR – by its practices. Also, it's important to point out the differences between Policies and Practices of HRSM. According to Jiang et al. (2012), policies are the desired direction and intention beyond a bundle of practices – normally related to the people's performance.

In concern to the definition of HR Practices, there is a relative consensus in the literature: “distinct set, but inter-relational activities, process and functions associated to the attraction, development and retention of human resources of an organization” (KAYA; KOC; TOPCU, 2010, p. 2033). In other words, the HR Practices should be aligned and directed to the strategic goals of the organization.

Delery and Doty (1998) pointed out that, even though isolated practices can produce the desirable goals, the internal alignment of human resources actions it's essential to the strategy implementation. Arthur (1994) was one of the pioneers about the HR systems or “packages” of HR practices, demarking the beginning of a set of studies. According to the author, the HR system with focus on commitment emphasizes the involvement of the

workers; has the goal to promote behaviors and desirable attitudes by the psychological ties between the individual and organizational goals.

According to Whitener (2001), if the HRM practices implanted are perceived as organization positive support, the worker will try to retribute, by a reciprocity norm, with his commitment.

Arthur (1994) was one of the pioneers of this research, demarking the beginning of a set of studies about the HR system or “packages” of HR practices towards commitment. In his research, the author analysed two systems (focus on “control” – or reduction costs and focus on the “commitment” or the maximization of commitment) and understood that the system that had “focus on the commitment” resulted in a bigger productivity and a smaller turnover in that set of organizations. According to the author, the HR system with focus on commitment adjusts to create a focus on organizational goals, because emphasises the involvement of the workers; the HCW (High Commitment Work) system promote behaviours and desirable attitudes because the psychological ties between the individual and organizational goals.

Pinho et al. (2010) conducted a qualitative study searching to understand which organizational factors influence organizational commitment: they found that training and benefits to the employees, followed by recognition.

In a literature review about HCWS, Argawala (2003, p. 179) found a range of practices associated with high commitment, listed in Table 1.

HR Practices related to commitment	Author
Recruitment and selection (highlighted practices)	Caldwell et al. (1996)
Socialization experiencies	Caldwell et al. (1996)

HR Practices related to commitment	Author
Career Opportunities / or opportunities of professional growth	Wallace (1995); De'Coninck e Stilwell (1996); Fenton-O'Creevy et al. (1997); Quarles (1994); Martin e Hafer (1997); Deery et al. (1994); Mallak e Kurstedt (1996)
Promotion opportunities	DeConinck e Bachmann (1994); Quarles (1994)
Justice on the promotions	Ogilvie (1986)
Recognition and appreciation	Mallak e Kurstedt (1996); Sharma e Singh (1991)
Development Activities	Fletcher e Williams (1996)
Satisfaction with the benefits	Ward e Davis (1995)
Flexible benefits plans	Heshizer (1994)
HR Practices related to the family	Grover e Crooker (1995); Aryee et al. (1998); Laabs (1998); Rodgers (1995)
variable pay/ variable rewards and the criteria used on the distribution	Caldwell et al. (1990); Quarles (1994); Deery et al. (1994); Wallace (1995); Mallak e Kurstedt (1996)
Organization communication and sharing information	Rodwell et al. (1998); Russell (1996)
Training offered by the organization	Chang (1999)

Table 1– HR Practices and Commitment. Source: Argawala (2003, p.179)

In a similar way, Xiao and Björkman (2006) listed studies that researched HRM practices related to commitment. The authors mentioned on Table 2 are the one which studies were based on empirical evidences.

		Delery & Doty (1996)	Youndt at al (1996)	McDuffie (1995)	Arthur (1994)	Guthrie (2001)
Internal Promotion		Yes				Yes
Distint Selection practices			Yes	Yes		
Training Programs		Yes	Yes	Yes	Yes	Yes
Job Safety		Yes		Yes		
Broad jobs				Yes		
Performance Management based on group performance			Yes			Yes
Performance management basead on competencies		Yes	Yes			
Performance Management with focus on development		Yes	Yes			
High Salaries			yes		yes	
Igualitarian policies					yes	
Participation				yes	yes	yes
Communication and information sharing						yes
Well defined goals			yes			
Teambuilding				yes		

Table 2 – Human Resources Practices and Commitment. Source: Xiao and Björkman (2006).

As it's possible to see by the theoretical background, there is no consensus on which HR practices are associate with organizational commitment. Despite that, some of these practices are recurrent, as illustrated in Table 3.

Human Resources High Commitment Practices	Authors
Participation, participative management	Pinho (2006) Xiao and Bjorkman (2006)
Organization communication and sharing information	Argawala (2003) Xiao and Bjorkman (2006)
Systems of variable rewards	Argawala (2003)
Systems of management of performance	Argawala (2003) Xiao and Bjorkman (2006)
Training offered by the organization	Pinho (2006) Xiao and Bjorkman (2006) Argawala (2003)
Recognition and valorisation of the professional	Pinho (2006) Argawala (2003)
Opportunities to rise in the career/ or opportunities for professional growing/Opportunities of promotion	Argawala (2003)
Intern promotion	Xiao and Bjorkman (2006)

Table 3 – HR High Commitment Practices Source: Author.

Main Contingencies – HR Systems with focus on commitment

The central issue of this section is: *under which circumstances the HR Systems, specifically the HCWS occurs and cooperate to organizational results?*

In the matter of *external contingencies*, the literature review pointed few studies dedicated to them. Stands out the culture of the country and their relation to trust due the relation to regulatory environment more or less restrictive (KIM; WRIGHT, 2011).

Paawe and Boselie (2005) argue that organizations are surrounding by in an **institutional context** that has influence on the HR systems. Aspects as legislation, regulatory aspects, political system, between others, are going to affect the working relations. Singh, Darwish, Costa and Anderson (2012, p. 653) differs external contingencies that are similar to all the organizations – *political nature, economic, social, regulatory and legal*, and others that can be considered as specifics: *just as the demand for services and products, market structure and competitive conditions*. There are some that can variate by economy sector, just as incentives, credit conditions and macroeconomic politics. Due the fact that the present study was realized in a unique country and state, it's possible to hypothesize that we can disregard certain variables, because all the researched organizations are influenced by the same variables (legislation, politics, social environment), even though the **different unions** can be understood as an external contingent variable.

In the matter of *internal contingencies*, the literature review pointed to the main following contingencies:

Origins of the company (country culture or founder values): Paauwe (2004) argues that the “best practices” are considered rule in the Netherlands – formalized by collectives’ agreements. Retirement plans, for example, are not noticed as “best practice” in

Netherlands, which occurs in the US. Others suggests the important influence of the culture of the company, represented by the founder, because certain choices inside the HR systems were made by the founder's values and beliefs.

Strategic orientation of the organization: studies uses typologies, like Miles and Snow (1978) and configurational systems of HR. Wright e Nishii (2007) said that strategy is a relevant and essential contingency factor to HRM. Schuler and Jackson (1987) found empirical evidences to the strategy influence on the HRM practices.

Company sector: the study of Ottenbacher, Gnoth and Joens (2006) point that the service is prevalent in adoption of HCWS because they are more dependent of the employee's behaviours and attitudes. Cappelli, Croker and Hefter (1996 as cited in Oliveira et al, 2014) explain that the relation between the HR Practices and the organizational competitiveness is more direct in services organizations, due to the fact that employees, for themselves, create what the organization sells. In other hand, Combs, Liu, Hall and Ketchen (2006) found a bigger effect on the HR practices of the industrial sectors in comparison to the service sectors.

Level of technology and IT adopted: this issue point to the more level of technology adopted, the higher adoption of HCWS, justifying that the human capital is relevant for the strategy, according to the study of Lepak e Snell (1999). Boxall e Macky (2007) mention the **industrial sector of high technology** for higher adoption of HCWS.

The prevalence of more **complex jobs or enriched jobs** are associated to autonomy, complex problem solving, participation and decision making (LAWLER, 1992; BOXALL; MACKY, 2007).

Type of employee: Paauwe and Boselie (2005) emphasise that the major of studies don't consider different types of employees. Lepak and Snell (2002), as already pointed,

advocate that not all the employees has the same strategical value inside the same organization and between organizations. Jackson, Schuler and Rivero (1987) found differences between the HR systems adopted by hourly wage and for employees in managerial level. Boxall and Macky (2007) allege that is frequent that the companies have different bundles of HR Practices – even though some of have intersection between them, for management, operational workers, specialized professionals and administrative assistants.

In conclusion, the study of Ichniowski (1990) considered contingence factors as: % direct employees; age; P&D investments; average educational level (years of formal study); capital intensity; number of employees in charge of unions; % unionized employees and employee growth rate in the last 12 years. The author found a statistic support for **age, % employees in unions, investment in P&D and average educational level.**

2. Research Procedures

Considering the aspects raised so far, the research sought to investigate the relationships between HRM practices associated to the *High Commitment Work System* (HCWS), raising possible contingencies to the adoption of this system, as well as the existing relationships between HR Practices Systems, levels of commitment and the intention to remain of the employees.

The research can be considered **multilevel**, that is, data were collected at the level of the organization and also at the level of the employees. The data collection at the level of organizations aimed to survey HR practices associated with the High Commitment System and also the contingencies of the organizations. The data collection at the

individual level allowed us to describe workers' perceptions about the ties and attitudes established with the organization (affective commitment and intention to remain).

The Sample

The research was done in secondary data, using a sample of 150 companies and more than 60,000 workers of a public survey that elects “the best companies for work in Brazil”, directed by the Foundation Institute of Administration (FIA). Such research does not have academic purpose, although it has been overseen by recognized Brazilian researchers in the field. The participant companies intend to stand out in the Brazilian market in terms of positive organization climate and human resources practices. The employees are also surveyed about their general perceptions about organization climate by IQAT (index of quality of the work environment). At the same time, companies, represented by Human Resources managers, responds to a questionnaire about their HRM practices (called IQGP, quality index in people management).

The top 150 were selected from all participant organizations (over 500), according to criteria that involve the level of reported sophistication of HRM practices and also through employee responses - the better the level of concordance the higher company's ranking. The chosen companies are visited by a group of researchers in order to know, *in loco*, the actual operation of these practices.

Variables

For the purposes of this research, part of the variables of the IQGP Survey was selected in the light of the theoretical background –practices are related to the HCWS – High Commitment Work System. The questionnaire (IQGP) was answered by the Human Resources manager and consists of questions such as: "(1) *The organization adopts formal*

mechanisms so that its employees are informed about their career possibilities and the career plan is structured, formalized and practiced". The answers are discreet (" yes or no "/" have or do not have ").

HRM Practices - HCWS

Therefore, based on the literature review, the following variables were selected from the IQGP questionnaire to represent the High Commitment Practices:

HRM Practices - HCWS	IQGP Variables
Authors	
Participation, participatory management Pinho (2006) Xiao and Bjorkman (2006)	V 190-191 - There is room to suggest and give an opinion on the company's strategy V 220 - (Definition of Goals) Those responsible for achieving the goals participate and influence their definition V 228 - There is room to suggest, implement innovations and improvements in products, services and internal processes in the company V 229 - There is a formal program for the adoption of ideas from employees, regardless of area or hierarchical level
Organizational communication and information sharing Argawala (2003) Xiao and Bjorkman (2006)	V156 - Yes and there is a formal program for dissemination of culture, mission, vision, values and the company code of ethics for employees V207 - (Strategy Disclosure) - Yes and there is dissemination of the strategy on the company's intranet page V208 - (Strategy Disclosure) Yes and there is dissemination of the strategy through newspapers and internal films V209 - (Strategy Disclosure) Yes and there is dissemination of the strategy through the company leadership
Variable rewards systems Argawala (2003)	V517- 521 Profit Sharing or Results Program (Yes or no)
Performance management systems Argawala (2003) Xiao and Bjorkman (2006)	V 720-721-722 - The process is carried out regularly at least once a year V 729-730-731 The process involves evaluating the employee by his or her immediate leadership V 783-784 - The process involves the evaluation of the development of skills/competencies V774-775- The process involves establishing and monitoring performance objectives and targets
Investment in T & D Pinho (2006) Xiao and Bjorkman (2006) Argawala (2003)	V 1114 a 1120 - Budget - bands 1 to 7
Recognition and appreciation Pinho (2006) Argawala (2003)	There are no variables with respect to this category of practices
Opportunities for advancement in career / or perceived professional Argawala (2003)	V 814 - 815 - There is career counseling through structured meetings with immediate leadership or people appointed by the company V 879 - 880 - The career plan is structured, formalized and

HRM Practices - HCWS	IQGP Variables
Authors	
	practiced
Internal Recruitment Xiao and Bjorkman (2006)	V 916 - The company maintains a formal internal recruitment program
Internal Promotion Xiao and Bjorkman (2006)	V 1020 - Number of promotions of other employees in the year before

Table 4 - Selected Variables. Source: Author

Contingencies

Of all the variables present in the IQGP, only two were selected, according to the theoretical background. The IQGP data doesn't have information about the strategy of the organization, level of technology adopted, types of jobs and prevalence of each of them. In this way, two contingencies were analyzed – Firm Sector and employees' degree of formal education.

Contingencies	Variable
Firm Sector Ottenbacher, Gnoth e Joens (2006) Cappelli e Crocker & Hefter (1996) Combs, Liu, Hall, & Ketchen (2006)	Registration Form
Education Ichniowski (1990)	V 42 a 45 - Employee education: primary, secondary, college and postgraduate

Table 5 – Variables associated with Contingencies. Source: Author

Affective Commitment and Intention to Remain

For the estimated measurement of the affective commitment, three variables of the IQAT were selected (filled by employees), which expresses bond, pride and trust in the organization - characterizing an affective bond with the same. As for the intention to remain, a variable was chosen to measure this attitude.

For these assertions, the employee should indicate agreement degree on a five-point Likert scale, from 1 (totally disagree) to 5 (totally agree) or DK / NR - "*I do not know or do not want to respond.*"

Variables (Individual Level)	Variables IQAT
Affective Commitment (adapted)	Q1 - I would recommend to my relatives and friends this company as a great place to work

Variables (Individual Level)	Variables IQAT
	Q 7 - I have confidence in the company in which I work Q 25 - I am proud to tell relatives and friends that I work at this company
Intention to remain	Q 68 - If my company provided life-long employment, I would never want to seek work in other organizations

Table 6 - Variables associated with affective commitment and intention to remain. Source: Author

Data Treatment

HRM Practices - HCWS Authors	IQGP Variables	Data Treatment – Research Variables
Participation, participatory management	V 190 - 191, V 220, V 228 , V 229	Participation Index: percentage index of the four assertions, where 100% is the presence of the four, 75% of three, etc.
Organizational communication and information sharing	V156, V207, V208, V209	Communication Index: percentage index of the four assertions, where 100% is the presence of the four, 75% of three, etc.
Variable rewards systems	V517	Index of Variable rewards systems: Binary variable (yes or no) - 0 or 100%
Performance management systems	V 720 - 722 V 729 - 731 V 783- 784 V774-775	Performance management systems Index: percentage index of the four assertions, where 100% is the presence of the four, 75% of three, etc.
Investment in T & D	V 1114 - 1120 – Budget range (bands 1 a 7)	Training Investment Index: training investment index based on the budget range (bands 1 to 7) combined with the total number of employees. Four indices were obtained: one (low), two (medium), three (high) to four (very high)
Opportunities for advancement in career	V 814-815 V 879- 880	Opportunities for advancement in career Index: percentage of the two assertions, where 100% is the presence of two, 50% of one, and so on.
Internal Recruitment	V 916	Internal Recruitment Index: Binary variable (yes or no) - 0 or 100%
Internal Promotion	V 1020	Internal Promotion Index: percentage of promoted number of total number of employees
High Commitment Work Practices - Index (HCWS)		Average of all indexes above (0 - 100%)

Table 7 – Data Treatment – HCWS. Source: Author

The variables were calculated as described on the Table 7 (Indexes of Participation, Communication, Variable Rewards Systems, Performance Management, and Investment in T & D, Career, Internal Promotion and presence of internal recruitment).

Based on the configurational approach (DELERY; DOTY, 1996), the Index of the High Commitment Work Practices (HCWS) was calculated from the average of all indexes.

The contingencies studied were obtained according to the data treatment presented below.

Contingencies	IQGP Variables	Data Treatment
Firm Sector	Registration Form	Given the dispersion of sectors of activity of the organizations, these were grouped into two types: industry (1) and services (2)
Education	V 42 - 45 - Employee education: primary, secondary, college and postgraduate	Index of education based on the number of employees in the indicated level, combined to the total number of employees. Percentages were obtained at each level of education

Table 8– Data Treatment – Contingencies. Source: Author

Finally, to obtain the level of employee commitment and their intention to remain, the data were treated as follows:

Variables (Individual Level)	Variables IQAT (1 to 5 scale)	Data Treatment
Affective Commitment (adapted)	Q1, Q7, Q25	Affective Commitment Index: percentage in the three assertions with grades 4 and 5 (agreement) and mean
Intention to remain	Q68	Intention to remain Index: percentage in the three assertions with grades 4 and 5 (agreement) and mean

Table 9 – Data Treatment – affective commitment and intention to remain. Source: Author

Data Analysis Plan

A quantitative-descriptive study was conducted using univariate and multivariate techniques. The analysis was planned in three steps. In the *first stage*, cluster analyzes were performed to identify groups of organizations with similar characteristics. These analyzes were carried out based on HCWS Practices mentioned earlier related to Participation, Communication, Performance Management, Investment in T & D, Career, Internal Promotion Index and presence of Internal Recruitment and Variable rewards systems.

Objectives	Data analysis	Level of analysis	Variables
Step 1: Identify and describe groups of organizations that	Cluster analysis to identify groups with	Organizational	High Commitment Work Practices - (HCWS)

Objectives	Data analysis	Level of analysis	Variables
resemble people management practices that focus on commitment	similar HR System characteristics Descriptive Statistics		
Step 2: Identify and describe contingency factors that are associated with the groups of organizations defined in the 1st Stage	Cluster analysis to identify contingencies Descriptive Statistics	Organizational	Cluster membership (generated in Step 1) Firm Sector Education
3ª Step: To compare levels of organizational commitment and intention to remain of workers belonging to organizations of different groups	Comparison of means (ANOVAs) to identify different levels of commitment and intention to remain of workers belonging to the identified organizational groups	Multi-level (Organizational and individual)	Cluster membership (generated in Step 1) Affective Commitment Index Intention to remain Index

Table 10 – Data Analysis Plan Source: Author

4. Main Results

4.1 Sample Characteristics

The sample is widely dispersed among various sectors of the economy. No prevailing sectors are observed. Only Health Services with 8.67%, followed by the Automotive and Retail Trade with 6.67%. Regarding the classification "industry or services", we obtained a predominant profile in services with 83 companies (55.3%).

Industry	N	%	Services	n	%
Agroindustry	2	1,33%	Wholesaler	2	1,33%
Food and Beverage	3	2,00%	Banking	3	2,00%
Automotive	10	6,67%	Retail business	10	6,67%
Eletroeletronic	6	4,00%	Consulting	2	1,33%
Pharmaceutic	4	2,67%	Education	3	2,00%
Cosmetics	3	2,00%	Energy	7	4,67%
Mecanics	1	0,67%	Engineering and Construction	6	4,00%
Packaging	3	2,00%	Hospitals	5	3,33%
Diverse	4	2,67%	Construction Materials	4	2,67%
Metal and Steel	7	4,67%	Automotive Services	3	2,00%
Textil	1	0,67%	Health services	13	8,67%
Mining	5	3,33%	Technology and Computer Services	9	6,00%
Furniture	3	2,00%	Transportation and Logistics	2	1,33%
Paper	4	2,67%	Services	2	1,33%
Chemestry and Petro	7	4,67%	Other Services	4	2,67%
Animal Nutrition	4	2,67%	Financial services	7	4,67%
			Public services	1	0,67%
			Telecommunications	2	1,33%
total	67	44,67%	total	83	55,33%

Table 11 – Sample Sectors. Source: Research Data

The sample has a total of 642,342 employees and shows a predominance of large companies with more than 1.501 employees (11% of the sample), followed by companies with up to 300 employees (representing 21% of the sample).

No. Employees	No.	total%
Until 300	32	21%
From 301 to 600	25	17%
601 to 900	9	6%
901 to 1200	10	7%
From 1201 to 1500	13	9%
Above 1501	61	41%

Table 12 – No. Employees. Source: Research Data

In addition, the sample has a predominance of secondary education among employees, with 45% of the total sample, followed by higher education, with 37%.

No. Employees	Primary	Secondary	College	Postgraduate
642.342	8%	45%	37%	10%

Table 13 – Education Index. Source: Research Data

4.2 HCWS – Descriptive Analysis

When analyzing the indexes related to the studied variables related to HCWS, we have the following general profile of the 150 companies:

Variables Index	Sample Results		
Participation Index: percentage index of the four assertions, where 100% is the presence of the four, 75% of three, etc.	76%		
Communication Index: percentage index of the four assertions, where 100% is the presence of the four, 75% of three, etc.	80%		
Index of Variable rewards systems: Binary variable (yes or no) - 0 or 100%	97%		
Performance management systems Index: percentage index of the four assertions, where 100% is the presence of the four, 75% of three, etc.	81%		
Training Investment Index: training investment index based on the budget range (bands 1 to 7) combined with the total number of employees. Four indices were obtained: one (low), two (medium), three (high) to four (very high)	<i>Investment Degree – T&D</i>	<i>No. companies</i>	<i>% total</i>
	Low (1)	37	25%
	Medium (2)	36	24%
	High (3)	38	25%
	Very High (4)	37	25%
	ni	2	-
Opportunities for advancement in career Index: percentage of the two assertions, where 100% is the	55%		

Variables Index	Sample Results
presence of two, 50% of one, and so on.	
Internal Recruitment Index: Binary variable (yes or no) - 0 or 100%	95%
Internal Promotion Index: percentage of promoted number of total number of employees	12%
Affective Commitment Index: percentage in the three assertions with grades 4 and 5 (agreement) and mean	87%
Intention to remain Index: percentage in the three assertions with grades 4 and 5 (agreement) and mean	65%

Table 14 – Variables Index. Source: Research Data

The 150 companies have high average rates in the HCWS practices: notably those related to variable rewards - which reaches 97% of companies and internal recruitment - reaching about 95% of these. The lowest average of the practices is in those relative to the career, with 55%. The variable "Investments in T & D" shows that there is a greater difference in the investment degree of the 150 companies. Employee affective commitment rates are very favorable: 87%.

4.3 HCWS – Cluster Analysis

1^a. Step: Identify and describe groups of organizations that resemble people management practices that focus on commitment

The descriptive analysis from the 150 companies carried out previously indicated that the variables related to Variable Rewards Systems - which reaches 97% of companies and Internal Recruitment Practices - reaching about 95% of these do not discriminate groups. Thus, we eliminate such variables from cluster analysis.

The hierarchical cluster analysis technique was used with the other variables: Participation Index (0 to 100%), Communication Index (0 to 100%), Performance Management Systems Index (0 to 100%), Training Index: one (low) to four (very high), Career Opportunity Index (0 to 100%) and Internal Promotion: percentage of promoted in the year (0 to 100%), using the between groups method. In this first processing, it was

evidenced the solution of three clusters, which was reprocessed by the K-Means method and confirmed, which is considered a more homogeneous distribution between the groups.

The Anova performed in the K-Means processing revealed that all variables contributed to the differentiation between the groups, except the percentage of promotions, according to test F and sig below:

	Cluster		Error		F	Sig.
	Mean Square	Df	Mean Square	df		
Index Comum	7329,016	2	493,728	143	14,844	,000
Index Partic	12968,678	2	477,118	143	27,181	,000
Ind Perform Manag.	47490,354	2	232,011	143	204,690	,000
Index Career	89619,354	2	506,330	143	176,998	,000
Index Promot	12,924	2	111,792	143	,116	,891
Index T&D	3,822	2	1,223	143	3,126	,047

Table 15 – Anova - Variables e Clusters. Source: Research Data - SPSS

The cluster membership was then associated with each of the companies in the sample, and we obtained the following clusters profiles:

Cluster Membership	N*	Comum Index	Partic Index	Perform Manag.	Career Index	Index Promot	T&D Index
1	26	72%	59%	26%	12%	12%	low (65% between levels 1-2)
2	45	69%	65%	90%	23%	13%	low (53% between levels 1-2)
3	75	90%	89%	93%	89%	12%	high (59% between levels 3-4)
	Average of 150 companies	80%	76%	81%	55%	12%	balanced distribution among levels of investment
*4 companies were not analysed due missing data							

Table 16 – Cluster Profiles (HR Practices Indexes). Source: Research Data - SPSS

As can be noticed on Table 16, in **Cluster 3**, *companies with high indexes in all variables were allocated*, except the promotion index (which did not discriminate the clusters, confirming the Anova test).

It is interesting to point that, through the clustering technique, it was possible to categorize the 150 companies *into three different HR practices configurations*, which is an important indication that confirms the *contingent assumptions of HR practices*.

Step 2: Identify and describe contingency factors that are associated with the groups of organizations (clusters) defined in Step 1

The Cluster Analysis on the contingent variables points out that **Cluster 1** can be considered a configuration of practices associated to **industry**, since only in this cluster was observed this predominance. Also, in this cluster we found a higher frequency of primary education employees (13% in the cluster *versus* 8% of the total sample). The **Cluster 2** aligns with the general profile of the sample, denoting no greater differences. On the other hand, **Cluster 3**, where all the HCWS are presented in high levels (as previously observed) is not differentiated from the total sample with respect to the **employees' educational profile**, which is a contingent factor related to the adoption of HCWS present in the literature (LAWLER, et al., 1995; LEPAK; SNELL, 1999). In addition, Cluster 3 does not stand out from the total sample as the predominance of the Service Sector, contrary to the studies of Ottenbacher, Gnoth and Joens (2006) and Lepak and Snell (1999). However, it is worth noticed that all of the hospitals surveyed are located in this cluster, as well as the majority of the automotive companies, the energy companies and the pharmaceutical and cosmetic companies. This fact may have been accidental or could be explained in future studies for reasons related to the general strategies of these sectors that affect HR strategies.

Cluster Membership	N*	Sector	HCWS	Primary	Secondary	College	Postgraduate
1	26	Industry (68%)	average	13%	53%	27%	7%
2	45	Services (60%)*	average	6%	45%	37%	10%
3	75	Services (55%)	high	8%	45%	39%	10%
	total sample	150		8%	45%	37%	10%
(*) : all of the hospitals; most of automotive companies, energy, cosmetics and pharma.							

Table 17 – Cluster Profiles and Contingencies Factors. Source: Research Data - SPSS

Step 3: Compare levels of organizational commitment and intention to remain of workers belonging to organizations of different groups

Commitment

The Anova test was carried out to show if the levels of commitment presented in the clusters are really different from each other. The test showed that there are no differences between the groups, which is also possible to observe by the inspection of the percentages, practically equal with the general profile of the sample of the 150 companies.

Cluster Membership	N*	Commitment Index
1	26	88%
2	45	87%
3	75	87%
	total sample	87%

ANOVA Table						
		Sum of Squares	df	Mean Square	F	Sig.
IndCOMPR *	(Combined)	18,52	2	9,26	0,288	0,75
Cluster Number of	Within Groups	4603,464	143	32,192		
Case	Total	4621,983	145			

Table 17 – Cluster Profiles and Commitment Index. Anova Test. Source: Research Data - SPSS

This finding means that although Cluster 3 is clearly associated with HCWS, the index of commitment is not different between the clusters. One possible explanation may be the limitation of the data - since the measurement of commitment was done only by

three variables of IQAT. Another plausible explanation is that the sample itself presents high levels of commitment, which reduces the potential for differentiation. This fact should be explored in future research.

Intention to Remain

Again, the Anova test was carried out to show if there are significant differences between clusters concerned with the intention to remain. The test showed that there are no differences between the groups, which is also possible to observe by the inspection of the percentages, in line with the general profile of the sample of the 150 companies.

cluster members.	n	Intenção Permanecer
1	26	69%
2	45	65%
3	75	65%
amostra total das 150		65%

		Sum of Squares	df	Mean Square	F	Sig.
INTPERM* Cluster	(Combined)	291,746	2	145,873	2,281	,106
Number of Case	Within Groups	9145,674	143	63,956		
	Total	9437,420	145			

Table 18 – Cluster Profiles and Intention to Remain Index. Anova Test
Source: Research Data - SPSS

4. Final Considerations

The general objective of the study was to identify the relationships between HR configurations practices, contingencial factors and commitment levels. It was possible to observe **three types of configurations of HR practices** in the sample, notably a group of companies adopting HR practices focused on high commitment (HCWS) - an important indicator that confirms the contingency assumptions of HR practices, since the sample can be considered homogeneous (The 150 best companies to work in Brazil).

Another contribution of this study was to verify the higher frequency of certain sectors (hospitals, automotive companies, energy, cosmetics and pharma) concentrated in the cluster of HCWS. Such evidence deserves research in future studies - as it may relate to general strategies of those sectors that affect HR strategies.

The study did not find differences in the levels of commitment presented by the workers among the clusters, nor did find differences in their intentions to remain in the respective companies. This fact is surprising, since high-commitment practices should, at least theoretically, lead to a higher level in this group. One of the possible explanations for this finding may be the limitation of the measurement of commitment - performed in an adapted manner (through existing assertions) and also by the high level of commitment expected among the 150 best companies to work for in Brazil, according to the research data. In any case, this fact deserves deeper explanation in future studies.

Referencies

ALBUQUERQUE, L. G. ; CHANG JUNIOR, J. Comprometimento Organizacional como Estratégia para Aumentar o Desempenho. 3Es 2005. **Anais...** p.1-16, 2005. Rio de Janeiro: ANPAD.

AGARWALA, T. Innovative human resource practices and organizational commitment: an empirical investigation. **International Journal of Human Resource Management**, 14(2), 175-197, 2003

ARTHUR, J. B. Effects of human resource systems on manufacturing performance and turnover. **Academy of management Journal**, 37(3), 670-687, 1994

BASTOS, A. V. B. Comprometimento Organizacional: um balanço dos resultados e desafios que cercam essa tradição de pesquisa. **RAE Revista de Administração de Empresas**, v. 33, n. 3, p. 52-64, 1993.

BASTOS, A. V. B.; RODRIGUES, A. C. A.; PINHO, A. P. M. Comprometimento organizacional: o que as pesquisas sugerem aos gestores. In: **Anais do IV Congresso de Psicologia Organizacional e do Trabalho**. 2010.

BOSELIE, P.; DIETZ, G.; BOON, C. Commonalities and contradictions in HRM performance research. **Human Resource Management Journal**, 15(3), 67-94, 2005.

BOXALL, P.; PURCELL, J. **Strategy and Human Resource Management**. New York: Palgrave Macmillan, 2003.

BOXALL, P., MACKY, K. High- performance work systems and organizational performance: Bridging theory and practice. **Asia Pacific Journal of Human Resources**, 45(3), 261-270, 2007

COMBS, J., LIU, Y., HALL, A., KETCHEN, D. How much do high- performance work practices matter? A meta- analysis of their effects on organizational performance. **Personnel Psychology**, 59(3), 501-528, 2006

DELERY, J. E.; DOTY, D. H. Modes of Theorizing in Strategic Human Resource Management: Tests of Universalistic, Contingency and Configurational Performance Predictions. **Academy of Management Journal**, v. 39, n. 4, p. 802–835, 1996.

DOTY, D. H.; GLICK, W. H. Typologies as a Unique Form of Theory Building: Towards Improved Understanding and Modelling. **Academy of Management Review**, v. 19, p. 230–251, 1994.

DUBIN, R. **Handbook of Work, Organization and Society**. Chicago: Rand McNally, 1976.

FISCHER, A. L. Um resgate conceitual e histórico dos modelos de gestão de pessoas. **As pessoas na organização**. São Paulo: Gente, 2002.

HUSELID, M. HOW ROBUST AND RELEVANT IS. **Human Resource Management**, v. 50, n. 4, p. 451–453, 2011.

ICHNIOWSKI, a **Human resource management system and the performance of US manufacturing businesses**. National Bureau of Economic Research, 1990.

JACKSON, S. E.; SCHULER, R. S.; RIVERO, J. C. Organizational characteristics as predictors of personnel practices. **Personnel Psychology**, v. 42, p. 727–786, 1989.

KAYA, N., KOC, E.; TOPCU, D. An exploratory analysis of the influence of human resource management activities and organizational climate on job satisfaction in Turkish banks. **The International Journal of Human Resource Management**, 21(11), 2031-2051, 2010.

KIM, S.; WRIGHT, P. M. Putting Strategic Human Resource Management in Context: A Contextualized Model of High Commitment Work Systems and Its Implications in China. **Management and Organization Review**, v. 7, n. 1, p. 153–174, 2011.

KLEIN, H. J.; MOLLOY, J. C.; COOPER, J. C. Conceptual foundations: construct definitions and theoretical representations of workplace commitments. In: H. J. Klein; T. Becker; J. P. Meyer (Eds.); **Commitment in organizations: accumulated wisdom and new directions**, 2009. New York: Routledge.

LAWLER, E. E., MOHRMAN, S. A., & LEDFORD, G. E. *Creating high performance organizations: Practices and results of employee involvement and total quality management in Fortune 1000 companies*. San Francisco, CA: Jossey-Bass, 1995.

- LEGGÉ, K. What is human resource management? In **Human resource management** (pp. 62-95). Palgrave, London, 1995.
- LEGNICK-HALL, M. L.; LENGNICK-HALL, C. A.; ANDRADE, L. S.; DRAKE, B. Strategic human resource management : The evolution of the field. **Human Resource Management Review**, v. 19, n. 2, p. 64–85, 2009. Elsevier Inc.
- LEPAK, D. P.; BARTOL, K. M.; ERHARDT, N. L. A contingency framework for the delivery of HR practices. **Human Resource Management Review**, v. 15, n. 2, p. 139–159, 2005.
- LEPAK, D. P.; SNELL, S. A. The human resource architecture: Toward a theory of human capital allocation and development. **Academy of Management Review**, v. 24, p. 31–48, 1999.
- MACKY, K.; BOXALL, P. High-involvement work processes, work intensification and employee well-being: a study of New Zealand worker experiences. **Asia Pacific Journal of Human Resources**, v. 46, n. 2, p. 38–55, 2008.
- MATHIEU, J. E.; ZAJAC, D. M. A review and meta-analysis of the antecedents, correlates and consequences of organizational commitment. **Psychological Bulletin**, v. 108, p. 171–194, 1990.
- MEDEIROS, C. A. F.; ALBUQUERQUE, L. G. DE; MARQUES, G. M. Comprometimento Organizacional: um Estudo de suas Relações com Características Organizacionais e Desempenho nas Empresas Hoteleiras. In: Encontro Nacional da ANPAD - EnANPAD. **Anais...**, 2005. Brasília - DF: XXIX EnANPAD.
- MEYER, J. P.; ALLEN, N. J. **Commitment in the Workplace: Theory, Research and Application**. Thousand Oaks, CA: Sage Publications, 1997.
- MILES, R. E.; SNOW, S. S. **Organizational Strategy, Structure, and Process**. New York: McGraw-Hill, 1978.
- MORAES, L. F. R. DE; MARQUES, A. L.; CORREIA, L. F. Comprometimento Organizacional: Uma contribuição ao constructo. XXII Encontro da ANPAD. **Anais...** p.1–15, 1998. Foz do Iguaçu: ANPAD.
- MORROW, P. C. Concept redundancy in organizational research: The case of work commitment. **Academy of Management Review**, v. 8, n. 486-500, 1983.
- MOSCON, D. C. B. Teorias implícitas de trabalhador comprometido e estratégias cotidianas de gestão: uma análise qualitativa. ,2009. Salvador: Dissertação de Mestrado em Administração. Universidade Federal da Bahia.
- MOWDAY, R. T.; STEERS, R. M.; PORTER, L. W. The measurement of organizational commitment. **Journal of Vocational Behavior**, v. 14, p. 224–247, 1979.
- OLIVEIRA, A. M. B. D., GONZÁLEZ, L. F., OLIVEIRA, A. J. D. Contextual variables as moderators of the relationship harm-organizational performance: a meta-analysis. **Gestão & Produção**, 21(2), 303-321, 2014

OTTENBACHER, M.; GNOTH, J.; JONES, P. Identifying determinants of success in development of new high-contact services: Insights from the hospitality industry. **International Journal of Service Industry Management**, v. 17, n. 4, p. 344 – 363, 2006.

PAAUWE, J.; BOSELIE, P. HRM and performance: what next? **Human Resource Management Journal**, 15(4), 68-83, 2005

PINHO, A. P. M.; BASTOS, A. V. B.; ROWE, D. E. O. Comprometimento, Enrincheiramento e Consentimento Organizacionais: o conceito desses vínculos entre gestores que atuam em diferentes organizações. Encontro de Estudos Organizacionais. **Anais...**, 2010. Florianópolis: ANPAD.

SINGH, S et al. Measuring HRM and organisational performance: concepts, issues, and framework. **Management Decision**, v. 50, n. 4, p. 651-667, 2012.

SIQUEIRA, M. M. M. Comprometimento organizacional afetivo, calculativo e normativo: evidências acerca da validade discriminante de três medidas brasileiras. Anais do XXV ENANPAD. **Anais...**, 2001. Campinas: ANPAD.

SCHULER, R. S. Strategic human resources management: Linking the people with the strategic needs of the business. **Organizational dynamics**, 21(1), 18-32, 1992

TRICE, H. M.; MOWDAY, R. T.; PORTER, L. W.; STEERS, R. M. Employee-Organization Linkages: The Psychology of Commitment, Absenteeism, and Turnover. **Contemporary Sociology**, 1984.

WHITENER, E. M. Do “high commitment” human resource practices affect employee commitment? A cross-level analysis using hierarchical linear modeling. **Journal of management**, 27(5), 515-535, 2001.

WRIGHT, P. M.; KEHOE, R. R. Human Resource Practices and Organization Commitment: A deeper examination. **Asia Pacific Journal of Human Resources**, v. 46, n. 1, p. 6–20, 2008.

WRIGHT, P. M.; NISHII, L. H. Strategic HRM and organizational behavior: Integrating multiple levels of analysis. **CAHRS Working Paper Series**, 468, 2007

WRIGHT, P. M.; MCMAHAN, G. C. Wright, McMahan - 1992 - Theoretical Perspectives for Strategic Human Resource Management.pdf. **Journal of Management**, p. 295–32–, 1992.

XIAO, Z.; BJÖRKMAN, I. High Commitment Work Systems in Chinese Organizations: A Preliminary Measure. **Management and Organization Review**, v. 2, n. 3, p. 403–422, 2006.