

Impact of Strategic Human Resources Management on Innovation

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ABSTRACT

Human Resources (HR) play a key role in the competitiveness of organizations and their capacity to innovate. This assertion confers on the decisions and the Human Resource Management activities a strategic dimension in the control of organizations.

A review of the literature identified four models of Strategic Human Resources Management (SHRM). These models seem to spark most interest among the academic community and the business world. Based on these models, our research consisted in measuring the impact of Human Resources Management (HRM) policies and practices on innovation and more generally on corporate performance. Within these models, three theoretical and empirical approaches can be considered : universalist, contingency and configurational.

To check these various approaches, an investigation into a panel of 1983 French corporations provided us with a certain number of answers as to the structure, the characteristics of the establishments (size, sector, number of executives, technological change...) and their various HRM practices (selection and recruitment, training and development, appraisal, rewards, career management...). The statistical processing of these answers enabled us to test the three approaches resulting from the literature review. Results show that relationships between HRM practices and innovation exist. The universalist and the configurational approach (which supposes that in order for HRM practices to have a positive effect on performance, these practices must not only be coherent, but must also be consistent with the firm's strategy) provides the best correlation between HRM practices and innovation.

KEYWORDS

Innovation, Organisational Performance, Human Resources Management Practices.

INTRODUCTION

Selection and recruitment, training and development, appraisal, rewards, career management competencies management, improving working conditions, communication, negotiation are so many human resources management practices (HRM practices) largely used in the companies of today. There has been a rash of studies showing a positive correlation between these HRM practices and organisational performance.

While these practices can be considered as competitiveness factors for companies and organisations, the formation mechanism of this competitiveness as well as the measurement of the contribution of each one of these practices or a set of practices is far from making unanimity within the academic community. Indeed, a great number of questions remain with no clear response : is there any better universal HRM practice? a better manner of recruiting? a better appraisal technique? a better way for competencies and employment describing? a better technique to manage careers? Which practices combinations have the greatest effect on the performance and those which induce weaker effects? How does one evaluate the organisational performance? Up to what point do HRM practices interact with the firm strategy?

The overview of theoretical currents on strategic human resource management (SHRM) brings some answers to these questions and recognise that organisations can be more effective if their executives are setting appropriate policies and practices. Within these theoretical currents, three approaches connecting HRM practices with performance might be considered : universalist, contingency and configurational approaches.

After having reviewed the conceptual part which makes it possible to introduce our central research question and our assumptions, one second part will be devoted to the presentation of our empirical methodology. Then, for the universalist assumption, we will present the various explanatory variables (HRM practices selected), explained variables (performance variable: profitability, motivation, quality...) and control variables. For the contingency assumption, it is required to introduce the strategy variable in addition to the other variables. Methodology relating to the third configurational assumption consists in gathering on the one hand HRM variables and on the other hand strategy variables in order to measure internal and external consistency.

Finally, we empirically examine the relationship between HRM practices and firm performance within the three approaches considered.

1. THEORETICAL BACKGROUND AND HYPOTHESES

“Firms can gain competitive advantage through human resources, the functions of human resource management have become viewed as a component of management’s arsenal of strategic weapons” (R.S Schuler & S.E Jackson, 1999). This report summarizes the evolution of the function staff management (gestion du personnel) appeared at the beginning of taylorism era. Indeed, the multiple activities and juxtaposed programs of the staff management (pay management, follow-up and control of the employees productivity) were succeeded initially by human resource management (HRM) which introduced human dimension into the management of firm resources (more responsibility, more co-ordination and co-operation between the various actors). Because of its subordinate character to the other organisational functions of firm (production, finance, marketing...), the HRM was recently prolonged by strategic human resources management (SHRM) which integrates HRM activities into the principal strategic objectives of the firm (Schuler, 1992). Thus some HRM practises can be qualified strategic only if they result in visible contributions with organisation efficiency (Bayad 2001).

The literature on SHRM abounds with theoretical models (descriptive, explanatory, prescriptive)(Guest 1999) which deal with articulation of HRM practices around the firm strategy. While referring to us with Bayad works (Bayad 2001) we retain four theoretical models : the RH accountancy model, the RH strategic planning model, the RH competitiveness model, and the RH competence model.

1.1. Theoretical models in SHRM

The main objective of the *RH accountancy model* is to make the company managers aware of the impact of their RH decisions on the achievement of organisation strategic objectives. This model is based on the value concept. This value can be estimated according to two methods:

- The financial¹ method which provides an estimate of the expenditure related with the constitution of the human capital of an organisation (Flamholtz, 1973)(Hermanson, 1963) (Hekieman & Jones, 1967)
- The behaviourist method which consists in indexing the value computed with the financial method by a personnel satisfaction indicator (Flamholtz, 1973)

This model relying on an extensive use of countable techniques to consider immaterial and social information, is largely criticized because it doesn’t accord to human resources the central place which they deserve (Likert, 1961).

The *RH strategic planning model* is based on strategic integration of RH activities. It seeks indeed, to ensure on the one hand an external coherence between RH strategy and business strategy and on the other hand an internal coherence between HRM activities and practices (Baird &

¹ The financial method is declined in 2 alternatives: an alternative spends that we presented and an alternative returned which consists in bringing up to date the sum of the future incomes to measure the value of RH

Meshoulam, 1988). The unit vision of the organisation and the rationality of the decision-making process retained by this model (Shein, 1987) tally badly with the power struggle, the inevitable conflicts of interests and the new constraints which organisations must undergo, day after day, (Handry & Pettigrew, 1990).

According to the **RH competitiveness model** upholders, the new conditions of competitiveness require a more flexible way of thinking which leaves a more significant place to new strategies and new organisational arrangements. Thus the concept of strategic integration relating to RH strategic planning model is replaced by strategic interdependence (Lengnick-Hall & lengnick-hall, 1988), organisational change (Pettigrew & Whipp, 1991) or collective negotiation (Kochan, McKerise & Capelli, 1984).

The **RH competence model** conceive RH strategy as an appropriate means which contribute to the creation of strategic resources for the organisation. These strategic resources (providing value, rare, inimitable, not substitutable) are at the base of the distinctive competence which makes it possible the organisation to build a durable competitive advantage (Barney, 1991).

1.2. Empirical Approaches in SHRM

As we underlined, the relationship between HRM practices and organisational effectiveness is far from constituting the unanimity, however at the end of the study of the four SHRM models suggested, three conceptual prospects are offered to us to study the links between HRM practices and the organisation performance.

The **universalist approach** gathers studies which attempt to locate and validate "best HRM practices" (Pfeffer, 1994). This approach is articulated around four principles:

- superiority and universality of the HRM practices : some HRM activities are always higher than others and can be applied in any organization (Delery & Doty 1996).
- selectivity and superiority of the financial reading of the performance : all HRM activities cannot considered to be strategic and HRM inducing highest financial performance will be preferred.
- autonomy and additivity : when several HRM activities are used simultaneously, the effect of these HRM practices on the performance is the resultant of the individual effects of each HRM practice.

This approach is supported by a great number of North-American empirical works (Bar and Simeus, 1997; Beats and Applebaum, 1995; Berg, Applebaum, Bailey and Kalleberg, 1996; Betcherman, McMullen, Leckie and Charon, 1994; Berg, 1999; Guerin, Wils and Lemire, 1997; Huselid, 1995; Huselid and Becker, 1997; Huselid, Jackson and Schuler, 1997; Ichniowski, 1992; Rondeau and Wagar, 1997; Stephen and Verma, 1995; Welbourne and Andrews, 1996). These works firmly validated the universalist prospect whose fundamental assumption that we retain for the continuation of our work can be stated as follows:

Assumption 1: The settlement level of powerful HRM practices is positively connected to the innovation of French companies.

The second approach or **contingency approach** suggests that organisations whose HR policy and practice are more responsive to external factors will report superior performance (Guest 1997)(Chandler, 1962)(Miles & Snow, 1978)(Porter, 1985). This approach assume an adequacy of HRM practices with the business strategy. It postulates that the performance of the organisation results from the fit between its structure and the characteristics of the environment (Lawrence & Lorch, 1967).

Contingency approach seeks to exceed the only financial dimension of performance to integrate other criteria like innovation, customer satisfaction, product quality, flexibility, or social image.

In spite of the lack of significant empirical work and at the end of many theoretical studies, the assumption of contingency validated by authors (Schuler and Jackson, 1987)(Kochan and Barocci, 1985)(Miles and Snow, 1984)(Fombrun et al., 1984)(Youndt, Snell, Dean and Lepak, 1996) can be written in the following way :

Assumption 2 : The relationship between HRM practices and the innovation in French companies is contingent with the type of organisational strategy adopted by these companies.

The **configurational approach** develops the idea of a holistic and incremental decision-making process. The configurations can be seen like an architecture of multiple (non-linear) and interactive bonds between the strategy elements and the HRM bunches of practices (Miller, 1989).

The choice of acceptable solutions concerns an interactive process between the anticipated strategic options (opportunities) and the RH capacity to bring them into play through the qualifications, the behaviours, the experiments of the actors. The interaction between RH strategy and business strategy reveals four strategic configurations (expansion, development, productivity, repositioning). Thus the HRM not has a real effect on the effectiveness only insofar as it manages to constitute a coherent regrouping of practices able to be harmonised with the principal characteristics of the organisation (Dyer & Holder, 1988); (Dyer & Reeves, 1995); (MacDuffie, 1995); (Whitfield & Poole, 1997); (Wright & Snell, 1991, 1998). Currently, some empirical studies tried to evaluate the effect of the regroupings of HRM practices on the performance of the organisations. Arthur (1992, 1994), Bird and Beechler (1995), Delery and Doty (1996), Dunlop and Weil (1996), Ichniowski, Shaw and Prensushi (1997), Kelley (1996), MacDuffie (1995), Youndt, Snell and Dean and Lepak (1996). The two assumptions encased, and relating to research for the internal and external coherence which we retain are :

Assumption 3. Larger will be the similarity between the work system found in the organisation and the theoretical work system, better will be the innovation of the French companies.

Assumption 4. Larger will be the similarity between the work system found in the organisation and the theoretical work system, and more this similarity will be related to a business strategy, better will be the innovation of the French companies

2. METHODOLOGY : STUDYING LINKAGE BETWEEN HRM PRACTICES AND INNOVATION

In order to validate our four research assumptions, we exploited the data of the REPOSE² investigation led by DARES³. Indeed DARES carried out, in 1992 and 1998, two successive editions of the investigation REPOSE practised on a random sample and representative of 3000 French establishments. The investigation was made out of three shutters : a shutter employers, a shutter employed and a shutter staff representatives. We are interested in this work in the shutter employers of the year 1998 which gathers nearly 2000 establishments belonging to the industrial sector, trade, transport and construction. The employers questionnaire includes 244 questions concerning the structure, the characteristics of the establishment (size, sector, turnover, rate of framing...), and the various HRM practices (recruitment, training, careers management, appraisal, negotiation, communication...).

The overall goals of our study are to amplify our understanding of the effects of HRM practices on the organisation performance and especially on innovation, thus the explained or dependent variable will be the organisation performance (innovation) and the explanatory or independent variables concerns the HRM practices studied.

Given the significant number of variables selected to translate the impact of HRM practices on innovation in organisations and in order to take the multidimensional effects into account, we chose to reduce the number of variables to some synthetic dimensions. For that, an Multiple Correspondences Analysis (MCA) was used for each variables block retained for the validation of the various models suggested in this study.

The analysis methods chosen to check our four assumptions want to be primarily quantitative. Such an analysis procedure was also retained by the majority of studies, reviewed in scientific

² Relation PrOfessionnelles et NégociationS des Entreprises

³ Direction de l'Animation de la Recherche, des Etudes et des Statistiques, du ministère de l'emploi et de la solidarité)

literature. The nature even of our problems hardly leaves us other choice. It's more precisely the multivariate regression analysis which will be used as statistical instrument throughout this research (let us note that the statistical analyses were carried out with the assistance of software SPAD and SAS).

For the *independent variables*, the researchers in SHRM tried to draw up an exhaustive list of HRM practices applied in organisations. The REPOSE investigation covers most of this list which can be gathered in five classes of HRM practices namely that are acquisition (organisation, recruitment, selection, integration and qualification), remuneration (inciting wages and appraisal), development (training and mobility), animation (information, participation and communication) and negotiation (representation, expression, discussion and conflicts).

There is a large literature on the management of innovation and technology (*dependent Variable*). A number of studies tend to assume that innovation is an important component of performance in organisations nowadays (Bayad & Liouville 2001)(Guest 1997)(Snell & Lepak 2000). Indeed, innovation help firms to gain competition battle. The Majority of the decision makers agree on the principal role of HR management to reach innovating organisation.

Because the imperative for an innovating organisation is to be the most unique producer, conditions of innovation must be created. According to R.M. Kanter : "innovation may originate as a deliberate and official decision of the highest levels of management or there may be the more-or-less "spontaneous" creation of mid-level people who take the initiative to solve a problem in new ways or to develop a proposal for change. Of course highly successful companies allow both, and even official top management decisions to undertake a development effort benefit from the spontaneous creativity of those below"⁴.

From the answers of the investigation the innovation variable include three indicators : significant technological change, introduction of new products and significant organisational change.

The *control variables* are employed in research on SHRM to avoid skews related to the structure effects which could affect as well the independent variables relating to HRM practices as the performance variables (Schmitt and Klimoski, 1988). In our study, we used the following control variables : size, the industry branch, the market nature, and the control of the establishment capital.

As we underlined, examination of the results of the investigation RESPONSE under the prospect for contingency introduced, in addition to the explained, explanatory and control variables, a contingency variable relating to the strategy which interferes in the bond between HRM practices and innovation. To introduce the contingency variable, we referred to Porter(1980, 1985) theoretical business strategy model. Indeed this model, largely recognised and shared by researchers, takes for asset that the type of strategy retained by the organisation will have a direct impact on the choice of HRM policies and practices. This model will be used, as well in the analysis of the contingency assumption, as in the analysis of the configurational assumption (Delery and Doty, 1996; Segev, 1989).

To validate the assumption (Assumption 3) related to the internal coherence principle of HRM practices under *the configurational prospect*, we sought to identify bunches of HRM practices in order to test their internal coherence. Thus in our work, we adopted three bunches of HRM practices which we extracted from theoretical literature namely that are engagement practices, control based practices and intermediate practices.

To test the assumption (Assumption 4) related to the external coherence of the HRM practices with the business strategy, we sought to determine the strategic configurations to which the bunches of HRM practices will be aligned later on. We retained for this study three strategic configurations suggested by Porter (1980, 1985) : a configuration based on cost minimization, a configuration based on differentiation and a focus⁵ configuration.

⁴ R.M .Kanter, "Supporting innovation and venture development in established companies" Journal of Business Venturing, Winter 1985, 47-60

⁵ mixture of cost minimization strategy and differentiation strategy

3. PRINCIPAL RESULTS

Our research question is to study the relationships between HRM practices and innovation in French organisations. The review of literature on SHRM enabled us to pose four research assumptions. These assumptions result from the three prospects under which these linkages can be studied: The principal results will be presented according to the order of the advanced assumptions.

Universel assumption

RH Strategy	Pratiques	Innovation
Acquisition	Organisation	0.042**
	recruitment	0.006
	integration	0.050***
	qualification	0.114***
Animation	information	0.092***
	communication	0.268***
	participation	-0.137***
remuneration	wage	0.203***
	inciting wages	0.052**
	Evaluation	0.005
development	formation	0.094***
Negotiation	representation	0.144***
	expression	-0.035
	discussion	-0.037
	conflicts	-0.002

Integration constitutes a strategic variable in SHRM and few employees seem insensitive to such a variable. Indeed, in a labour market, this element is one of the main claims of the trade unions and the employees representative. It is even a central element of electoral arguments of the principal political parties. The social importance of this variable was recovered by the researchers on social and management sciences. Results obtained from our sample of REPONSE investigation strongly validate the existence of a relationship between the presence of practices and policies aiming at increasing the integration of employees and the increase of performance in these establishments. This variable also influence positively innovation ($\beta = 0.050$; $p < 0,01$).

The literature on GSRH also shows that the qualification structure can also be used as precursory element of the organisational effectiveness (Arthur, 1994; Lawler, Mohrman and Ledford, 1992; MacDuffie, 1995; Osterman, 1994; Pfeffer, 1994). Such conclusions do not confirm the theoretical theses of Hackman and Oldham (1975) or of Herzberg (1966) which showed that a qualifying and varied work constituted, a kind of lever allowing the firm to increase its performance level (e.g. satisfaction, motivation, output and quality). From this study, we will retain primarily the weight of engineers, technicians and executives in the employment structure. This variable influence positively innovation indices ($\beta = 0.114$; $p < 0,01$).

The practices of information ($\beta = 0.092$; $p < 0,01$) and communication ($\beta = 0.268$; $p < 0,01$) exert a positive effect on innovation.

The participation practices (i.e. participation in quality action, existence of workshops), are able to vary significantly the index of innovation which varies in a negative direction. Indeed, more the practices of participation are significant more the index of innovation is weak ($\beta = -0.137$; $p < 0,01$).

In parallel, scientific literature on GSRH early identifies wages practices and inciting remuneration as being elements able to increase the level of organisational effectiveness (To armour, 1990; Fossum and McCall, 1997; Ledford, 1995; Mitchell, Lewin and Lawler, 1990; Weber, 1994; Weitzman and Kruse, 1990). Thus, wages practice and inciting remuneration seem present in the

majority of SHRM models (Dyer and Kochan, 1995; Pfeffer, 1995; Pfeffer and Veiga, 1999). The practices of inciting remuneration exert a positive effect on the innovation ($\beta = 0.203$; $p < 0,01$) for wage practises and ($\beta = 0.052$; $p < 0,05$) for inciting remuneration. We can also see that training and representation induce positive effects on innovation.

Contingency assumption

HR strategy □ strategy	Practical	Innovation
Acquisition	Organisation	-0.006
	recruitment	-0.005
	integration	-0.024
	qualification	-0.024
Animation	information	-0.028
	communication	-0.005
	participation	-0.028
remuneration	wage	0.039
	inciting wages	-0.033
	Evaluation	-0.014
development	formation	0.014
Negotiation	representation	-0.027
	expression	0.000
	discussion	-0.033
	conflicts	-0.008

The analysis of cross effects (crossing business strategy and RH strategy) shows that very few variables of organisational performance seem influenced by stowing between HRM practices and the organisational strategy. In fact, the only statistically significant results seem paradoxical (example : reverse relationship between the animation practices and the firm economic performance) and difficult to explain. On this point, we must recognise that analyses are to be deepened.

Configurational assumption

	Innovation
Minimisation cost stratégie DR²	0,156***
Focus strategy DR²	0,140***
Differenciation strategy DR²	0,198***

The results table above shows that the more coherent HRM practices are, and the more they evolve within a favourable strategic framework, better will be the organisational capacity to innovate (number of innovations introduced, success of organisational change operated)

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