

SMS's INNOVATION AND HUMAN RESOURCES MANAGEMENT

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Abstract

This paper aims at analysing the relationship between innovation and human resource management (HRM), attempting to establish whether innovation determines the firm's human resource management or, conversely, human resource management influences the innovation level of the company. Based on this review, some research hypotheses are formulated. Article's findings results provide evidence that, in order to affect employee behaviour, the firms must develop a bundle of internally consistent HRM practices.

Keywords: Innovation; Small to medium-sized enterprises; Human resource management.

JEL Classification: L25, M54.

1. Introduction

Innovation and human resources management play an increasingly important role in sustaining "leading edge" competitiveness for organisations in times of rapid change and increased competition. "Discontinuous change requires discontinuous thinking. If the new way of things is going to be different from the old, not just an improvement on it, then we need to look at everything in a new way".

The continuous hegemony of innovation and creativity arises from organisations recognizing that correctly harnessed creativity can offer companies a competitive advantage (Porter, 1980). The analysis of the strategies of the top companies of the future, the structural flexibility and innovative power were listed among the top drivers of future success.

Today, firms are facing a competitive and continuously changing situation. In this context the performance, and even the survival, of firms depend more than ever on their ability to achieve a solid and competitive position and on their flexibility, adaptability and responsiveness. Therefore, it is hardly surprising that there is growing interest in innovation as a strategy that allows the firm to improve its flexibility, competitive position and performance.

A company will create new products for a variety of reasons, but usually in an attempt to increase profits. The most profitable new products will be those that meet the customer needs more effectively than competitors' products, and are therefore

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preferred by more customers. Companies need to identify those needs, and then generate ideas and solutions to address them.

Many articles on innovation and creativity begin with a general statement that companies must innovate or they will die. While this is generally true, any company that is inefficient in vetting and implementing new product ideas or a company that continually introduces the wrong products will consume its own resources and will also fail.

In the management field, a host of variables has been identified as influencing organizational innovation:

- *having a vision of what the organization wishes to be,*
- *searching for opportunities, experience and technological potential*
- *following market orientation,*
- *market evolution and segmentation and the promotion and management of creative resources.*

Human factors and, in particular, human resource management, are today considered key elements of successful innovation, since the human element is involved in the whole innovation process. Specialists state that there are no good technologies or good innovations without competent people who can adequately use them and get benefit from them. At the same time, no competent people can be available if there is not, first, a business project defining the role that technology and innovation must play and creating the necessary and sufficient conditions for channelling aptitudes, capacities and attitudes of the individuals towards the established direction.

Considering that HRM determines and modifies, to a large extent, these aptitudes, capacities and attitudes, it seems clear that it becomes a crucial element in the development of innovation activities. Human resource management has been, up to now, scarcely treated in studies on innovation in the firm. Although there have been some empirical studies in recent years, their conclusions are heterogeneous and most of them have focused on U.S. firms.

2. Dimensions of SMS's growth through innovation

Three main sources of growth can be determined:

a) *Technological improvement* – It is well known that processes and technology improvements can contribute to meeting quality and process - performance objectives.

b) *An increase in the quantity of capital* – Very often, technology is deeply linked to investment because it is embodied in new machinery and better equipment.

c) *An increase in the number of workers, their skills and educational levels.*

Industry growth depends on several internal and external factors, such as physical assets, technologies all along the chain value, human resources in general and qualification levels in particular and also organizational capabilities. In general, the firms are more likely to reap profits and social benefits when they are in high-growth industries.

SMEs can increase their activities and businesses in some ways and grow in some dimensions. The following dimensions can be identified:

a) *Raise the level of integration of the technologies* – The management of technologies and the exploitation of all their potential is strictly linked to the possibility of integrate their synergies.

b) *Intensify innovative technology processes* – This direction of innovation is a decisive contribution for the modernization of businesses and the implementation of competitive strategies.

c) *Increase the number of markets where the company operates* – Internationalization and globalization are direct consequences of this decision.

d) *Increase businesses' portfolios* – The company that today is involved in a given industry can tomorrow widen its investment to other industries;

e) *Increase the number of operational uses of technologies* – Many technologies can have applications in operations of a different nature.

To position strongly for future growth in the global marketplace, an organization has to make some effort to increase its investments in R&D and to focus on the implementation of advanced production innovations and practices.

The growth of an organization, the technologies that are being used along all its activities, and business strategies that have been formulated are strictly related. Even organizational culture deals with technologies and growth.

Technological progress driven by a decision to enhance productivity and profitability often fosters growth. The competitive success of most enterprises is strongly related to decisions such as:

- *producing products and services according to high quality standards;*
- *quantifying production in the correct manner;*
- *anticipating and responding to changing consumer needs;*
- *reducing production costs in order to enhance profitability.*

The growth effort has to include:

- *New technologies for manufacturing with ecological safety.*
- *Designing and modelling of secure facilities.*
- *Adopting zero-waste procedures in manufacturing and processing.*
- *Upgrading of existing installations.*
- *Developing new organizational tools and methodologies.*
- *Reducing resource consumption in order to reach competitive production costs.*

The success of SMEs depends on:

- *using advanced technologies in an integrated manner,*
- *being aware of changing clients' needs, producing quality goods and services,*
- *enhancing profits by reducing costs,*
- *reaching new markets within a competitive perspective,*

- *wide-open mentality.*

Many SME's are not able to envisage growth as a competitive need and this difficult mentality and/or reluctance should be understood.

The identification of innovative improvements that could enhance organizations' movements for growth is a decisive process to reach growth objectives. Innovation in production, distribution, and communication processes serve as a vital source of productivity growth and other competitive advantages. The success of most management innovation processes is also a function of competitive efforts.

The managerial decision regarding obtaining growth results has to take into account what is needed to reach a rapid modification in the professional qualification levels of workers and managers. It is indispensable that a strict and dedicated cooperation exists among governmental entities, industries and educational sectors. When an entrepreneur does not have experience and technical knowledge in the financial domain he may have a distorted perception of the reality, because an increase in sales does not necessarily correspond to an increase in profitability and, therefore, does not open the possibility of self-financing. It is well known that some entrepreneurs prefer self-financing because it provides them with more control. It is required to create new higher education models in the domain of entrepreneurship. We agree that a new higher education models will require the commitment of governments, universities, and associations.

3. The relationship between innovation and HRM

There are no best HR practices, because in order to be effective, HR practices must be consistent with other aspects of the organisation, specifically its strategy. The most suitable HRM practices for firms trying to develop a competitive advantage based on innovation will be different to those practices suitable for firms seeking other kind of competitive advantage.

Some studies have focused on some isolated HRM practices while others have focused on the HR system adopted by the firms. The underlying assumption of these studies is that the impact on organizational performance of sets or "bundles" of interrelated HR practices can be greater than the cumulative impact of all the individual practices comprising the bundle. Most of the above mentioned studies are based on the models proposed by well-known specialists (Miles and Snow and Schuler and Jackson). Their model proposes the development of a market-type HRM system for those firms defined as prospectors, firms characterized by the search for new products and markets, which are, therefore, the innovators. They argue that it is very difficult for the firm to provide the necessary abilities for a new market or product from inside the company and, more importantly, to provide them quickly. Therefore, these authors recommend searching outside for these abilities whenever the organization needs them, i.e. developing a market-type HRM system.

Other specialists (Schuler and Jackson) establish a connection between HRM practices and three types of strategy: costs, quality and innovation, defined from Porter's (1980) classification of competitive strategies. Their model starts by analysing the employees' behaviour required by each kind of strategy; subsequently they propose HRM practices for the development of these behaviours. In their view, when contemplating an innovation strategy, the firm needs creative employees who are flexible and tolerant of uncertainty and ambiguity; people who are able to take risks and assume responsibilities, very skilful, able to work in a cooperative and interdependent way and with a long-term orientation.

The HRM practices that those systems include are listed in Table I.

We can say that, between specialists, there is agreement, first, about the importance of linking HRM and innovation and, second, regarding the form of some HRM practices, particularly the use of external sources of recruitment, performance appraisals and incentives. There is no consensus regarding other HRM practices such as employment security, training, career paths or employee participation. Furthermore, empirical research conclusions are also heterogeneous.

For this reason, can be formulated propositions about the relationship between innovation and HRM practices following both Miles and Snow (1984) and Schuler and Jackson (1987).

The first hypothesis refers to isolated HRM practices.

1. The strategy developed by a firm determines the HRM practices it carries out. Thus, innovative firms will carry out HRM practices consistent with this strategy.

This hypothesis is broken down into two according to the theoretical model employed:

- a. *Firms following an innovation strategy will be characterised by the use of external sources of recruitment, low employment security, narrow application of training, very little use of internal career paths, the use of performance appraisal systems, incentive-based compensation and low employee participation.*
- b. *Firms following an innovation strategy will be characterised by the use of external sources of recruitment, high employment security, broad application of training, the use of internal career paths, the use of performance appraisal systems, incentive-based compensation and high employee participation.*

The second hypothesis is formulated from a configurational perspective:

2. The strategy developed by a firm determines the HRM system it implements. Thus, innovative firms will implement an HRM system consistent with this strategy.

Table 1 - HRM practices for innovation

	Miles and Snow's model	Schuler and Jackson's model
<i>Recruitment and selection</i>	Emphasis: "buy" Hiring almost exclusively from outside the organisation Selection may involve pre-employment psychological testing Very little employment security given Little if any socialisation taking place within the organisation	External sources of recruitment Technical and research competencies High employment security
<i>Training</i>	Skill identification and acquisition Limited training programmes	Broad application Employees are responsible for learning Jobs that allow employees to develop skills that can be used in other positions in the firm
<i>Development and internal career opportunities</i>	Very little use of internal career ladders	Broad career paths
<i>Performance appraisal</i>	Results-oriented procedure Identification of staffing needs Division/corporate performance evaluations Cross-sectional comparisons	Mandatory competency growth Process and results criteria Performance appraisals that are more likely to reflect longer-term and group-based achievements
<i>Compensation</i>	Oriented toward performance External competitiveness Total compensation heavily oriented towards incentives and driven by recruitment needs	Many incentives Internal equity Low pay rates but employees are allowed to be stockholders and have more freedom to choose the mix of components that make up their package Team innovation awards
<i>Other HRM practices</i>	Low employee participation Implicit job analysis Job enrichment	Competency-based pay High employee participation Implicit job analysis Job enrichment Cross-functional teams Communication: feedback on new product sales

source: Daniel Jimé'nez-Jimé'nez and Raquel Sanz-Valle

As in the previous case, alternative hypotheses are formulated according to the reference models, Miles and Snow (1984) or Schuler and Jackson (1987):

- a. *Firms following an innovation strategy will adopt an HRM system characterised by the use of external sources of recruitment, low employment security, narrow application of training, very little use of internal career paths, the use of performance appraisal systems, incentive-based compensation and low employee participation.*
- b. *Firms following an innovation strategy will adopt an HRM system characterised by the use of external sources of recruitment, high employment security, broad application of training,*

the use of internal career paths, the use of performance appraisal systems, incentive-based compensation and high employee participation.

The assumption that strategy determines the firm's HRM practices is implicit in these hypotheses, as most of the contingent literature suggests.

3. **The HRM practices developed by a firm determine its strategy.** Thus, firms that carry out HRM practices consistent with innovation will follow an innovation strategy.

- a. *Firms characterised by the use of external sources of recruitment, low employment security, narrow application of training, very little use of internal career paths, the use of performance appraisal systems, incentive-based compensation and low employee participation will seek a more innovative strategy.*
- b. *Firms characterised by the use of external sources of recruitment, high employment security, broad application of training, the use of internal career paths, the use of performance appraisal systems, incentive-based compensation and high employee participation will seek a more innovative strategy.*

Regarding the configurational approach, the following hypotheses are formulated:

4. **The HRM system developed by a firm determine its strategy.** Thus, firms that implement an HRM system consistent with innovation will follow an innovation strategy.

- a. *Firms adopting an HRM system characterised by the use of external sources of recruitment, low employment security, narrow application of training, very little use of internal career paths, the use of performance appraisal systems, incentive-based compensation and low employee participation will seek a more innovative strategy.*
- b. *Firms adopting an HRM system characterised by the use of external sources of recruitment, high employment security, broad application of training, the use of internal career paths, the use of performance appraisal systems, incentive-based compensation and high employee participation will seek a more innovative strategy.*

Some European studies based on the models mentioned above, on small and medium enterprises, revealed the relation between HRM and innovation. According to the literature, HRM is a key element for the success of innovation, not many empirical studies have provided support for it.

Using a contingency approach, different strategies will require different employee skills, knowledge and behaviours to be implemented. Presumably, HRM policies can influence these employee characteristics.

There is agreement between specialists about, first, the relationship between innovation and HRM and, second, that in order to improve innovation, the adoption of HRM bundles is superior to any of the individual HRM practices of which they are composed. On the other hand, there are inconsistencies in the literature about the contents of these bundles. Some authors suggest that employment security, extensive training or employee participation have a positive impact on innovation, while others think they have the reverse effect.

4. Conclusions

Alternative hypotheses, following the two most widely-accepted theoretical models, have been proposed in this paper. The conclusions drawn from European studies about HRM impact on firms' innovations using the above models are the following:

- *There are empirical evidences that innovation explains the adoption of some HRM practices. The choice of an innovation strategy implies the use of an incentive-based compensation, the encouragement of employee participation, the use of appraisal systems and the use of broad internal career opportunities.*
- *The HRM practices condition the firm's orientation towards innovation. The participation and the use of promotion plans significantly explain the firm's innovation orientation.*

The importance of aligning HRM practices and innovation is a clear implication for managers. Schuler and Jackson's model and Miles and Snow's explains the fit between innovation and HRM. The firms that adopt an innovation strategy are more likely to use internal labour markets than external ones.

The use of HRM practices aimed at building a stable group of employees in the company, which can adopt risks and experiment and which can participate in the adoption of the decisions that affect their jobs. This is more likely to create the conditions for the emergence of the new ideas that feed innovation.

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