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THE ADOPTION OF ICT IN HUMAN RESOURCES MANAGEMENT AND PERFORMANCE: WHAT EXISTING LINK?

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ABSTRACT
The aim of this paper is to demonstrate the level of ICT adoption in human resources management (HRM) and its correlation with performance. However, despite the challenges they face in adopting ICT tools in HRM, these companies remain high-performing. We recommend that the leaders of these companies change their employees' perception of using ICT tools in HRM in order to enhance their performance and strengthen their learning processes with the tools at their disposal

Keywords:
Information and Communication Technology, Human Resource Management, Performance.

INTRODUCTION

We are in a transitional period, between the industrial revolution that gave rise to "the utopia of communication," according to Breton (1997, cited by Guihot, 2001), and the rapid emergence of a society often referred to as postmodern. This latter is characterized by an "explosion of communication," largely propelled by Information and Communication Technologies (ICT), as highlighted by Guihot (2001).

In this context, no organization can ignore the importance of ICT in achieving optimal performance. Innovation has become a crucial driver of competitiveness, growth, and profitability for companies, as emphasized by Ben Yakoub and Achelhi (2021). Thus, companies are heavily investing in adopting these technologies to improve their position in an increasingly competitive market (Paré and Sicotte, 2004).

ICT is introduced into organizations to provide real competitive advantages and fully exploit emerging technologies, requiring the development of a supra-architecture for their application in Human Resources Management (HRM) of companies. However, rather than focusing solely on the technology itself, it is crucial to understand how individuals use it. Studies on the appropriation of ICT shed light on the keys to this understanding, the categorization of user-actors, their operational location, and their impact on business performance. DeSanctis and Poole (1994) emphasize that the positive impact of introducing technology into an organization largely depends on individual appropriation, an idea reinforced by Pasquati (2009).

In this context, several technological applications allow managers and employees to directly access HR and other workplace services, facilitating communication, performance, team management, and training (Wyatt, 2002). However, the implementation of these tools in organizations varies depending on the level of employee appropriation, the degree of adoption of practices, and the work environment. Thus, this study aims to determine how the appropriation of ICT in HRM influences performance.

1. LITERATURE REVIEW

The adoption of new information and communication technologies (ICT) now represents a significant challenge for businesses. In existing literature, various studies have explored the concepts of technology appropriation and use in different fields. This study will focus on analyzing the appropriation of ICT in the context of human resource management (HRM) and aim to understand its impact on organizational performance

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1.1. LITERATURE REVIEW ON HUMAN RESOURCE MANAGEMENT:

Over the past few decades, human resource management (HRM) has undergone significant evolution. Since the 1980s, numerous studies have been conducted to highlight its role within companies' overall strategies (Drira, 2022). This discipline has captured the attention of many researchers. According to Roussel, as cited by Moreno (2008), HRM is defined as "the set of activities aimed at developing the collective efficiency of individuals working for the company." This efficiency is measured by goal attainment, and the mission of HRM is to guide the development of human resources towards achieving the company's objectives. HRM develops strategies and means in the field of human resources, as well as organizational and logistical arrangements to develop the skills necessary for achieving the company's goals.

Dolan et al. (2002) describe HRM as "the set of activities aimed at managing talents and individual energies to contribute to the achievement of the organizational mission, vision, strategy, and objectives." This definition highlights the role of HRM in achieving organizational objectives and, by extension, performance.

Belanger et al. (1993) define HRM as "the set of activities for acquiring, developing, and retaining human resources to provide organizations with a productive, stable, and satisfied workforce." However, Arcand (2000) points out that despite numerous studies showing a correlation between HRM and performance, the results often remain ambiguous, describing the relationship as a "black box." Several researchers argue that the evolution of the HRM function has given it a strategic character. Hence, the term strategic human resource management (SHRM) is used. Boxal and Purcell (2000) propose three questions to assess the quality of SHRM in a company: firstly, identifying important strategic choices in HR management to ensure performance; secondly, how these choices are made and aligned with the company's overall strategy; finally, the effectiveness of HRM and its ability to generate overall performance or even sustainable competitive advantage.

A literature review is necessary to define SHRM because there are as many definitions as there are authors, although the foundation of all these definitions remains the same (Bayad et al., 2004).

Miller (1989) defines it as "the set of decisions and actions related to employee management, at all levels, aimed at creating sustainable competitive advantage." Wright and McMahan (1992) emphasize that SHRM is a set of HR activities that help the organization achieve its goals. Walker (1992) believes that SHRM is the means to align HRM with organizational strategies. However, Huselid, Jackson, and Schuler (1997) differ in their opinion, as they linked a company's performance to the skills of HR managers. Lepak and Shaw (2008) show that the definition of SHRM is based on three postulates: macro-level analysis, horizontal and vertical understanding of SHRM.

1.2. LITERATURE REVIEW ON PERFORMANCE

The analysis of various definitions of performance emphasizes its polysemic nature, characterized by a broad and sometimes ambiguous sense. Etymologically, the term "performance" derives from the Latin "parformer," meaning "to perform entirely."

In the 15th century, its English equivalent, derived from the verb "to perform," was associated with the accomplishment of processes or tasks with attributed results and successes. By the 17th century, dictionaries defined performance as execution and accomplishment. Its meaning expanded in the early 20th century, notably in the railway sector, where it was used to quantify the capabilities of a machine and denote high efficiency (Berland and Dohou).

In literature, performance is approached through a plethora of concepts, making it a challenging notion to precisely define. Bourguignon (2000) defines it as the achievement of organizational objectives, regardless of their diversity and nature. According to Bourgignon (1997), performance can have three distinct meanings: firstly, related to organizational success; secondly, to the results of actions taken, without value judgment; finally, to the actions themselves rather than their consequences, considering performance as a process rather than an outcome. Henri Bouquin (2004) establishes three fundamental principles for performance criteria: economy, aiming to optimize resources at a lower cost; efficiency, examining the relationship between results and means, seeking to maximize production or services based on available resources. Performance, previously primarily associated with financial aspects, gradually expanded during the 20th century to include multiple and complex dimensions (Chakravarthy, Venkatraman 1986). Schools of thought develop their own criteria for effectiveness and analysis, integrating economic, social, political, and systemic dimensions. Recent theoretical developments on organization and management adopt a holistic and systemic view of performance, integrating the organizational dimension. Indicators thus focus not only on financial measurement but also on customer satisfaction, product or service quality, and company competitiveness. However, the definition of performance is often controversial, leading to debates among various stakeholders, which gives performance its

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multidimensional aspect. Different authors consider performance from various perspectives. Some prioritize the evaluation of financial results, while others include non-financial indicators related to work organization, satisfaction, motivation, and human resource management. These divergences have led to studies exploring the relationship between performance and human resource practices.

2. THE ADOPTION OF NEW INFORMATION AND COMMUNICATION TECHNOLOGIES AND HUMAN RESOURCE MANAGEMENT

According to Chaney (2008), the term "appropriation" originates from the Latin "appropriare," meaning to render suitable for a specific use, adjust, or conform. It describes the act of attributing something to oneself, beyond its mere legal dimension. Gauche (2013) identified two interpretations of the Latin etymology of the concept of appropriation, from the Latin terms "appropriatio" and "proprificatio," leading to the same general meaning: making something one's own for an individual, group, or agent. Ologéanu and Staii (2008) note that in everyday language, "appropriation" retains its original sense: to grasp, make one's own, take possession of something. However, for this study, the definition of Pelletier and Moreau (2008) will be adopted, defining technological appropriation as the combination of individual psychological factors and technical knowledge that promote the spontaneous use and creative adaptation of a tool or software application by individuals within an organization, voluntarily.

2.1. INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTS) APPLIED TO HRM

The adoption of Information and Communication Technologies (ICTs) is now essential to ensure a company's competitiveness. Indeed, the various tools deployed to integrate ICTs throughout the organization, particularly in human resource management (HRM), facilitate their appropriation.

- ICT Tools in HRM in Enterprises

The market for human resource management (HRM) software relies on products that cater to fundamental management needs, including personnel administration and payroll. Increasingly, both private and public organizations are turning to standardized software packages for these functions. These software packages have the advantage of integrating multiple organizational functions simultaneously, thus reducing the need to use different, often incompatible software. They cover the entire spectrum of HRM processes, and some are even Enterprise Resource Planning (ERP) systems aimed at integrating the organization's key functions in real-time through a single database.

According to Kocoglu and Moatty (2010), aside from basic equipment such as telephones and fax machines, the diffusion of new information and communication technologies (ICTs) in companies can be analyzed at three levels of equipment:

- ✓ The first level pertains to network equipment, including local area networks, computerized data exchange, intranet, websites, electronic information-sharing tools, and extranet, among others.
- ✓ The second level of equipment concerns data management and includes computer applications intended to manage the company's information system. These applications enable the grouping, organization, and structuring of data to facilitate their use through search, analysis, and archiving tools.
- ✓ Finally, the third level of equipment is characterized by the development of integrated management software and collaborative work software (Groupware). ERPs aim to network all information related to the company's functions using a single database. Concurrently, electronic document management offers tools and techniques to digitize, classify, manage, and store documents from computer applications within the company's activities.

However, the adoption of these tools in Moroccan companies requires a shift in thinking and flexibility in the face of change. Thus, this study will focus on the impact of ICTs in HRM and their effect on performance, specifically targeting first-level tools according to the classification of Kocoglu and Moatty (2010)

- **First-level tools: the intranet**

The use of an intranet is intuitive and highly user-friendly. The training period is reduced, and the resulting speed significantly enhances the company's responsiveness. By integrating with existing systems, the intranet simply allows for a rethinking of already established tools and their incorporation into communication interfaces. This presents a significant advantage in terms of reducing development and training times. As a result, the intranet frees the company from time and space constraints by facilitating the rapid dissemination of information. According to Vaast and Benghozi (2000), an intranet can include various fundamental components such as messaging tools, groupware, databases, among others, and serve various functions. The diversity of technical tools, projects, and achievements underlying the term "intranet" makes understanding its reality challenging.

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2.2. THEORIES of ICT Appropriation

Several theories and studies have been identified to explain the appropriation of information and communication technologies within organizations. Therefore, we will subsequently examine the works that have relied on behavioral theories and those focusing on the diffusion of ICT in organizations.

2.2.1. Behavioral Theories:

Several theories explain behavioral theory. Thus, we distinguish:

2.2.1.1. Theory of Reasoned Action

The Theory of Reasoned Action is widely used to explain the adoption behaviors of new information technologies (ICT) within organizations. A study by Hartwick and Barki (1994), cited by Gagnon (2003), showed that, during the implementation of ICT, subjective norm is an important determinant of adoption behavior, in addition to attitude. However, according to Otieno et al. (2015), while the Theory of Reasoned Action is robust, it is not widely used in information systems research. In cases where it is used, it tends to be complemented or replaced by other theories such as the Technology Acceptance Model or the Innovation Diffusion Theory.

2.2.1.2. Theory of Planned Behavior

Al-Ghaith (2015) utilized the Theory of Planned Behavior to examine intentions of participation and behavior of individuals on social networks. Results showed that attitude and subjective norm significantly impact participation intention, which also influences actual participation behavior. Similarly, Shareef et al. (2009) found that individual differences moderate system adoption and usage, influencing attitudes, intentions, and behaviors of individuals according to the Theory of Planned Behavior.

2.2.1.3. Interpersonal Behavior Theories

In a study on the development and implementation of information technology project management tools to enhance productivity and quality while saving time, effort, and resources, Mohan (2010) highlighted that dimensions such as perceived value, workgroup influence, self-efficacy, and organizational characteristics positively impact the development of intention to use these tools. On the other hand, Betts et al. (2014) combined Interpersonal Behavior Theory and Organizational Justice to thoroughly examine employees' behavior using internet access at work for personal purposes (cyberloafing).

3. LINK BETWEEN THE APPROPRIATION OF ICT IN HRM AND PERFORMANCE

Habibi and Guati (2021) emphasize that innovation is a crucial element for businesses in general and SMEs in particular, enabling them to achieve a competitive advantage and a continuously improving level of competitiveness. They consider it a determining factor of a company's performance. However, Fernandez and Jomaa (2005) remind us that the link between ICT investments and business performance remains a recurring question in information systems research. Despite numerous studies aiming to establish this relationship, empirical results are often ambiguous or even contradictory due to the diversity of analysis levels and the conceptions of performance adopted. Furthermore, Benbahia and Rajaa (2016), along with several researchers, highlight that the relationship between HR practices and company performance follows a causal chain of effects, first affecting proximal performances and then distal performances, including social, operational, financial performance, and market outcomes. Research such as that of Den Hartog and Verburg (2004, cited by Benbahia et al., 2016) or Evans and Davis (2005) have examined the mediating role of a company's social structure in this relationship. Larraza et al. (2006) also integrated the mediating variable associated with technology to examine this relationship among manufacturing companies. Yalabik (2008) studied the impact of high-performing HR practices on employee turnover rates. Despite the wealth of studies on the link between HR practices and performance, few researchers have integrated e-HRM into their inquiries into companies' commercial performance.

4. LIMITATIONS OF NTIC ADOPTION IN HR MANAGEMENT

People et al. (2011) identified a difficulty in the adoption of new information and communication technologies (ICT) whereby users perceive human resources information systems (HRIS) as being imposed rather than offered. Faced with this situation, their general sentiment is often one of passive acceptance: "anyway, that's how it is, we don't have a choice." This same issue has been raised by other researchers. For instance, Paquet (2005) asserts that information systems are imposed on employees because the system configuration is typically decided at the highest level of decision-making in the company.

The implementation of the system then leads to the classic problems associated with change, such as anxiety and reluctance among the actors who must adapt their practices. In particular, one of the major risks associated with

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ICT tools in human resources management is their improper use by the employees involved. Diallo and Laval (2006) indicate that this improper use, characterized by a lack of interest or skills, can have several origins: a lack of training for organizational actors, poor identification of the project's initial needs, and resistance to change from certain actors who feel threatened or incompetent in the face of emerging technology. It is therefore crucial to pay particular attention to training the actors using ICT tools in HR, to properly identify needs from the outset of the project, and to consider technological, organizational, and social aspects to minimize the risks of failure. In essence, the success of the company is closely linked to the success of these projects.

CONCLUSION

Over time, businesses have managed to develop robust human resources management practices, supported by constantly evolving methods and tools. Their financial commitment to research, field studies, and the establishment of corporate universities, along with their support for top management schools, has allowed these HR practices to progress and gain credibility over the decades. Regarding our article, our main objective was to clarify the significance of the topic at hand. Initially, we explored various questions that gradually found answers throughout our in-depth study. The first section provided an overview of existing definitions of human resources and performance. Next, we examined the appropriation of ICT in human resources management and presented the various theories on this subject before explaining the link between ICT appropriation and human resources management. Finally, we highlighted the limitations of ICT appropriation in HR.

Our research aligns with the conclusions put forth by Iubatti et al. (2010), who emphasize that the use of ICT tools in innovation facilitates the effective management of information flow and activities within the company, thus establishing a positive relationship between ICT and company performance.

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