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THE CAPACITY OF ABSORPTION AND THE MANAGEMENT OF HUMAN RESOURCES IN ASYMMETRICAL STRATEGIC ALLIANCES: THE CASE OF MOROCCAN SMES

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Abstract. *Purpose* – The aim of this work is to analyze human resources mechanisms in order to enhance the absorption capacity of SME in strategic alliances with foreign partners, the goal being to favor the transfer of know-how to these enterprises.

Research methodology – The methodology applied is quantitative, based on a questionnaire addressed to 108 SME. SPSS 25 software was used to analyze the result.

Findings – The results of the study underline the critical role employees' play in the knowledge transfer process by dwelling on the need of an absorption and assimilation capacity since businesses with such capacities are conducive to the acquisition, putting into use and development as well as the creation of new skills and know-how.

Research limitations – The quantitative approach of this research could be complemented by qualitative analysis. Additionally, generalizing the results from a sample of SMEs opens avenues for future research in other developing countries. Temporal and contextual extension could also enhance the relevance of the conclusions.

Practical implications – Our results could be used to provide key indicators for managers of SMEs engaged in strategic alliances. The guidelines aim to streamline the transfer, acquisition, and development of new skills and know-how from foreign partners.

Originality/Value – This study innovatively clarifies the administration of human resources in SMEs' in asymmetrical strategic alliances, offering valuable insights for research into management practices.

Keywords: absorption capacity, strategic alliances, human resources management, transfer of knowledge.

JEL Classification: M12, L24, O33, L26.

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1. Introduction

Strategic alliances offer businesses in the Global South a significant opportunity to gain valuable technical know-how and thereby bridge the gap that separates them from their Western counterparts. Such new forms of investment (Oman, 2002) constitute a means of acquiring new knowledge in collaboration with a foreign partner and is a way through which organizational skills and know-how may be transferred from one entity to another (Kogut, 1988) functioning through a logic of exchange and close interaction.

However, in order to avoid the potential inconvenience of an undue technological dependence on Northern partners, companies that benefit from such technological transfers should

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also strive to develop an autonomous innovative capacity (Stock et al., 2001). To bring this about, these must set up and internalize dynamic mechanisms which allow them to assimilate and put into operation new knowledge acquired from their foreign partners by relying on their human resources (Amit & Schoemaker, 1993; Minbaeva, 2003). This business aptitude falls under the term "capacity of absorption" (Cohen & Levinthal, 1990). At the organizational level, the capacity of absorption can be succinctly described as the ability of a business to assimilate and apply outside knowledge as a way to stimulate innovation (Schmidt, 2005).

Actually, the main objective of this research lies in the broader context of the effort to acquire technology by bringing a greater scientific contribution, taking greater advantage of areas of management and thereby enhancing perspectives offered by the economy. Our attention is focused specifically on Morocco and Moroccan SME involved in strategic alliances with foreign businesses. The heart of this research lies in the desire to guide these Moroccan enterprises in their quest to acquire technological skills by prioritizing the human dimension as the fundamental means of reaching this objective.

Therefore, our work is aimed at resolving the following research question: How can Moroccan enterprises which are engaged in asymmetrical strategic alliances with foreign partners manage to effectively mobilize their human resources in order to develop a technological absorption capacity?

The inherent interest in this subject lies in the fact that absorption capacity constitutes a major challenge for the Moroccan state as well as for the businesses and professionals of the country. From the point of view of Moroccan economic authorities, the construction of a competitive economy and the strengthening of economic indicators demands that economic actors be provided with production capacities founded upon know-how and a strategic competitive edge (Amachraa & Quelin, 2022).

In Morocco, scarce elements as far as production factors are concerned are not limited only to capital and technology but also to human skills (Rüller et al., 2021). Indeed, the process of acquiring knowledge and know-how becomes essential in order that companies stimulate their competitivity and raise the added value of their products. The human factor lies at the core of the process as a key element (Torres et al., 2018). The dynamic of strategic alliance gives Moroccan enterprises an opportunity to pick up knew knowledge and skills by signing into a perspective of organizational learning.

At the level of Moroccan businesses, the challenge is also crucial since the acquiring of organizational skills and knowledge within such strategic alliances demands that the enterprise thus benefiting from such an alliance put in place a series of organizational mechanisms directed towards the motivation of its personnel, aimed at forming employees in the acquiring, assimilating, transforming and ultimately, taking full advantage of any new knowledge (Valentim et al., 2016). Consequently, an effective human resources management is destined to play a vital role in the development of absorption capacity through variables such as recruitment, training and evaluation among others. In this context, internal skills and external collaboration mutually complement each other.

Upon addressing concepts such as capacity of absorption, strategic alliances and human resources management, we position ourselves within the domain of the theory of the Resource-Based View whose proponents see an enterprise as a set of unique resources which are

both tangible and intangible and which the organization much take advantage of as a source of its potential competitive edge (Barney, 1986; Wernerfelt, 1984; Hamel & Prahalad, 1999).

Besides, the resource-based theory suggests that human resources systems could contribute to a long-lasting competitive advantage thanks to the development of specific skills within a business (Karman, 2020). This has given rise to a distinct branch, that is, the theory founded on skills, the skills-based view (Hamel, 1991) whereby human skills are considered a specific resource.

After a literature review addresses strategic alliances and capacity of absorption, our article will be developed in three Sections. First, we will present our hypothesis and conceptual model. Afterwards, we will share the result of our study followed by a discussion Section. We will then conclude by shedding light on the theoretical and practical implications of our findings while pointing out potential routes for further research.

2. Literature review and situational statement

2.1. Strategic alliances, capital development, and learning dynamics: A comprehensive exploration within SMEs

Integrating insights from multiple studies on strategic alliances, human capital, intellectual capital, and organizational learning within SMEs, a comprehensive understanding emerges. Cegarra-navarros (2005) exploration of organizational learning through strategic alliances emphasizes the significance of knowledge as a fundamental resource for sustainable competitive advantages. This insight is reinforced by Ferreira et al. (2019) study, which extends the focus to technology-based SMEs in Portugal, demonstrating that strategic alliances serve as a crucial means for overcoming human capital resource constraints. Building on this, Ferreira et al. (2022) delve into the absorptive capacity perspective, revealing that strategic alliances strongly influence intellectual capital development in technology-based SMEs. This not only addresses resource constraints but also underscores the practical implications for business practices. Similarly, Mahamadou's (2016) investigation into size asymmetry in SME-MNC alliances provides nuanced insights, indicating that while size asymmetry may not adversely affect financial performance and organizational learning, it does impact relational performance.

Expanding the geographical context, Mohammadi and Wong (2011) focus on Malaysia, characterizing SME strategic alliances as a reliable and effective management strategy. The study emphasizes a systematic approach, highlighting the importance of selecting potential partners and the critical role of learning and sharing knowledge resources.

Martínez-Costa's et al. (2019) study explores the direct and indirect effects of an innovative culture in SMEs on interorganizational collaborations and organizational learning. The findings underscore the positive influence of an innovative culture on successful innovation, with organizational learning mediating the impact of external collaboration.

Examining external organizational learning sources, Bierly and Daly (2007) provide a comprehensive view of SMEs' learning patterns. Learning from customers, suppliers, the scientific community, and other industries is common, with noteworthy effects on innovation speed, operational efficiency, and process technologies. However, learning from competitors negatively impacts product technologies and basic research, and size differences play a role in emphasizing specific learning sources.

Benhayoun et al. (2021) contribute insights from collaborative innovation networks (CINs), emphasizing the role of absorptive capacity (ACAP) in SMEs' learning processes. ACAP actions and attitudes, such as acquisition, assimilation, and application, are identified as crucial components, showcasing their nuanced deployment in managing the interplay between reciprocal and one-way learnings.

In China, Chen and Lee (2015) conducted a study on the acquisition of foreign knowledge through inter-firm collaboration and recruitment: Implications for the national growth of businesses in emerging markets. Examining a sample of companies that underwent initial public offerings (IPOs) in the domestic market and originated from the Zhongguancun Science Park in China, they found that privatized state-owned enterprises benefit more from foreign collaboration, while entrepreneurial firms benefit more from recruiting repatriates. Additionally, the positive impact of foreign collaboration was diminished in the presence of repatriates within the management team.

In the Portuguese context, a study conducted by Blomberg and Löwstedt (2009) involved 31 interviews with managers and professionals from seven SMEs whose main objective is inter-organizational knowledge acquisition: An individual perspective on managers and professionals in SMEs. The study reveals that managers and professionals acquire crucial knowledge from inter-organizational relationships that go well beyond those formally designed for knowledge acquisition purposes.

Another study conducted by Martins in 2016 focused on the specific context of two former industrial regions in Europe – South Yorkshire (United Kingdom) and the Northern Region of Portugal. The study aimed to identify and conceptualize a set of relational capabilities that business leaders perceive as playing a key role in industrial rejuvenation. The results indicate that the identified relational capabilities require structured communication processes and alliance management practices to enable and support absorptive capacity and learning in interorganizational networks.

In 2009, an exploratory study was conducted by Goswami et al. (2009) utilizing existing theories and evidence of firms expanding in various directions through new types of alliances. The study concludes that organizations need to acquire tacit knowledge and enhance their knowledge stock by continually absorbing and assimilating new ideas and research findings.

Finally, a study conducted by Bouhalleb and Arafet (2023), explored the mediating role of network skills in the context of SMEs. Results from simultaneous equation modeling (SEM) and fuzzy-set qualitative comparative analysis (fsQCA) showed that organizational skills are primarily influenced by the SME's ability to adapt to change and establish relationships with external partners to identify entrepreneurial opportunities.

2.2. The capacity for absorption: A means of transferring knowledge

Absorption capacity is defined as "the capacity of an enterprise to acquire new knowledge, assimilate it, transform it and use it ultimately towards commercial ends." This leads to greater innovation in the business and determines its competitive edge. A substantial number of studies show the existence of a positive relationship between absorption capacity and an overall improvement in the organization (García-Sánchez et al., 2018). Kedia and Bhagat (1988) recognized this capacity (Veuglers & Cassiman, 1999) as one of the fundamentals

of technical formation within an organization. Likewise, Lane et al. (2006) found that the emergence of the concept of absorption capacity coincided with the development of the resource-based theory and therefore, the creation of wealth by an enterprise is determined by unique resources, skills and capabilities which are rare and inimitable (Penrose, 1959; Barney, 1986). Certain authors think that the interaction and the ties of an enterprise with its foreign partners reinforces its capacity of absorption and enhances its efficiency of transfer (Hamel & Pralahad, 1999; Hamel, 1991; Levinson & Asahi, 1995). Along the same line, Daghfous (2004) suggests that the receiving entity must expand its capacity to gain access to external knowledge, transform it in order to improve its base skills and strengthen its absorption capacity. Likewise, Cohen and Levinthal (1990), Levinson and Asahi (1995), Grant (1996) find that the mastery of the sources of the capacity of absorption means that an organization places a special accent on the structure of communications among the external environment, the organization and its sub-units. Purnam et al. (2006) state that "the capacity of absorption is a learning process that involves the difficulty of evaluating the intellectual capital acquired by a society and then incorporating it into its capital". Zahra and George (2002) set forth a new concept in absorption capacity based on the three stages mentioned by Cohen and Levinthal (1990) and goes on to propose a fourth, necessary for the application of knowledge, that is, its transformation. The stages are as follows (see Table 1).

Table 1. The learning process of absorption capacity (source: author's conception)

Author	Stage	Content
Noblet and Simon (2010), Zahra and George (2002), Von Krogh et al. (2012)	Acquisition	The capacity of a manager to identify and pick up knowledge coming from outside sources effective for the organization (Von Krogh et al., 2012). Determined by the intensity, speed and direction of the effort of identification and the acquisition of knowledge, it's the capacity to ascertain the value of various ideas and information received. In a exploratory study over absorption capacity, the authors Noblet and Simon (2010), formulate recommendations along with those set forth by Zahra and George (2002), over the point of view strategic which can be readily incorporated from acquisitions and contact with clients.
Park et al. (2007), Doolittle (2014)	Assimilation	A process that enables the analysis, interpretation, treatment and comprehension of external knowledge which can improve individual efficiency (Park et al., 2007), it is considered by the constructivist theory as one of the means by which an individual adapts to his environment (Doolittle, 2014).
Alamargot (2001), Ritala and Hurmelinna-Laukkanen (2013)	Transformation	Deals with the capacity of a receiving entity to integrate knowledge acquired and absorbed to knowledge it already possesses (Ritala & Hurmelinna-Laukkanen, 2013). This stage represents the capacity of the individual to develop a mental structure which helps him integrate already existing know-how to newly acquired and absorbed knowledge by allowing him to infer and construct explanations based on its composing elements (Almargot, 2001).
Lane and Lubatkin (1998), Burcharth et al. (2015)	Exploitation capacity	The capacity of the manager to use acquired knowledge commercially to reach organizational objectives. Lane and Lubatkin (1998), Zahra and George (2002), consider it as routines that enable a receiving entity to refine, extend and exercise an impact over existing skills or to create new ones by integrating knowledge acquired and transformed. Precisely through this stage, absorption capacity exercises all its value (Burcharth et al., 2015).

In the literature over the capacity of absorption, new conceptualizations which incorporate skills and motivations of the personnel (Minbaeva & Michailova, 2004), prior knowledge (Lane et al., 2001), the pertinence of knowledge, the similarity of organizational structures and shared research communities (Lane & Lubatkin, 1998) have been observed. Daghfous (2004) proposed the determining factors that affect absorption capacity such as the sources of internal knowledge, among these education level, professional experience, diversity of origins, the individual capacity for absorption, the role of professional participants, organizational structure, culture and inertia, the size of the enterprise, inter-functional communication, human resources management and investment in research and development as well as the sources of external knowledge (Ma et al., 2023), among these, contacts with clients, counterparts and colleagues and their position in the network of knowledge.

2.3. Human resources management. Tools of application of absorption capacity

Various authors state incontestably that HRM is a means to develop learning capacity (Kamoche, 1997; Kamoche & Mueller, 1998; Eneroth & Larsson, 1996; Lado, 1994) while Argyris (2004) affirms that "an enterprise can't become a learner if unless it manages to diffuse a people first philosophy focused on its actors." Nevertheless, the role of HRM in the appropriation of knowledge and the picking up of absorption capacity needs to more explicitly established (Kamoche & Muller, 1998), since our knowledge of the way in which human resources management influences over absorption capacity and knowledge transfer remains quite rudimentary" (Minbaéva, 2003). Our concept of the role of HRM in providing an enterprise with a greater absorption capacity will essentially lie on the model of absorption capacity conceived by Minbaeva and Michailova (2004). These authors elaborated a conceptual model over capacity of absorption in which emphasis was placed on employee motivation on one hand as well as their individual capacity as vitally important aspects determining absorption capacity. Over development, these authors evoke organizational mechanisms and managerial practices, essentially the HRM aspect, as a measure to increase capacity of absorption (Hooi, 2021).

We chose to refer to this model for various reasons. First of which is its clarity and simplicity since the model is precise in its explanation of the capacity of absorption brought about by HRM practices (Popaitoon & Siengthai, 2014). To the best of our knowledge, the literature provides no more pertinent framework. Also, its composing elements are measurable in Moroccan enterprises.

3. Elaboration of the hypotheses and of the conceptual model

Based on the literature review, we can set forth the following hypotheses which affect individual capacity of absorption and the role of the latter in the transfer of knowledge which have been effective in Moroccan enterprises.

3.1. Functional mechanisms addressed at employee competence

According to the model, two mechanisms influence employee competence, that is, the formation and evaluation of performance. We consider that the fact of associating performance

evaluation with formation and training to constitute skills remits us to a pragmatic approach over the concept of competence which is quite commonplace. Competence has never been solely linked to knowledge since it also includes practices and know-how and attitudes and knowing-how-to-be (Durand, 2000). Along the same line of thought, Permartin (2005) stated that competence has no operational value except when it is placed at the service of the objectives of the enterprise. Here, the dynamic approach of individual and organizational is found which must be aligned with strategic challenges of the organization.

We count on measuring employee skill the traditional way, through indexes such as the educational level of the cadres and of the operational. However, during certain interviews, as we will point out in the next chapter, we had the opportunity to ask the person we interviewed directly to evaluate the employee level of competence. In that case we realized that evaluation along with other indexes will be among the elements of confirmation or refutation of the evaluation carried out by the person in charge.

3.1.1. Formation

The role of formation is widely accepted in the literature as an instrument of developing competence and therefore, a means of creation of strategic assets. The role of formation from the perspective of appropriation of knowledge, however, remains less developed (Kamoche & Mueller, 1998).

Indeed, training plays a crucial role not only in the development of skills but also in the creation of strategic knowledge within companies. Organisation for Economic Co-operation and Development (2024) report, companies that invest in the continuous training of their employees are better prepared to innovate and adapt to changes in the global market.

Moreover, recent studies (Lopez-Cabrales & DeNisi, 2021) have shown that companies adopting training practices aligned with their strategic objectives are more successful in integrating external expertise, particularly within the context of international strategic alliances. These practices are crucial for knowledge appropriation and the long-term improvement of organizational performance.

In our research, training and formational practices should be linked to the objectives and organizational routines within a strategic perspective of appropriation. Professional formation and development should be conceived not only in terms of formation of competence but also as the creation and putting into practice of new knowledge (Durand, 2000). Emery and Gonin (2009) point out the emergence of a paradigm of HRM focused on "competences" as well as on "performance". According to the former paradigm, employers are not only going to attribute the necessary means to different stages of development but will also contribute to forging new values linked to human resources from the collective ensemble of personnel by considering these moreover as a source of wealth which must absolutely be invested in as well as a foundation which must be nurtured.

We will measure the importance of training practices at the core of Moroccan enterprises which are involved in strategic alliances and in which formation measures are aimed at absorbing external knowledge provided by the foreign partner. The criteria used to measure this variable will deal with the types of formation adopted (internal and external sources, by

the partner, formal and informal formation…) the existence of a formational plan, continuing training programs and eventually the part of the budget for formation in the total payroll etc.

H1a: *In the Moroccan context, formation is positively linked to employee skills.*

3.1.2. Evaluation of employee performance/competence

Recent studies (Lopez-Cabrales & DeNisi, 2021) emphasize the importance of aligning performance evaluation with organizational learning objectives to foster innovation and adaptability. This approach ensures that the evaluation criteria reflect not just immediate outcomes but also long-term strategic goals.

The evaluation of performance is one of the most difficult tasks of HRM since it hardly escapes from the realm of the arbitrary and subjective. It boils down to the difficulty in determining and measuring performance and the lack of devices in that sense (Badawy, 2007; Emery & Gonin, 2009). The question arises: what should be evaluated and what are the objective criteria for performance? Performance must be defined in function of the strategic objectives of an enterprise. So, for example, an enterprise pursuing a strategic objective of holding down costs, focuses its evaluation criteria on immediate short-term results of employees (Guérin, 2011). On the other hand, organizations which face challenges of learning are likely to base their evaluation on initiative and creativity whose performance in the latter case will be defined by the degree of learning obtained and the application of new methods by employees. The business must therefore encourage experimentation and risk-taking, tolerate failure in the early stages while stimulating learning in the future (Schuler & Jackson, 1987). In this context, the integration of continuous feedback mechanisms, as highlighted by Armstrong and Taylor (2020), becomes crucial for supporting employee growth and ensuring that evaluations contribute to both individual and organizational development. McGrath et al. (1995) affirm that initiatives generate competence when they are in coherence with strategic objectives.

Furthermore, along the same strategic line, the enterprise must proceed with the evaluation of competence in order to determine the level of employee skills, their needs and training and /or recruitment actions in order to cover those needs.

Finally, the results of the evaluation process must serve as a base to reward employees in terms of salary, (pay raises, bonuses) and career opportunities (internal promotion, reorientation.).

In this perspective, we formulate our first hypothesis as follows:

H1b: *In the Moroccan context, evaluation of performance and competence are positively linked to employee skills.*

3.2. Functional mechanisms aimed at employee motivation

Recent studies (Gagné et al., 2020) have expanded on these early theories, emphasizing the role of intrinsic motivation in fostering employee engagement and long-term commitment. The integration of modern motivational strategies, such as providing opportunities for autonomy and mastery, has been shown to significantly enhance job satisfaction and organizational loyalty.

Since the results of Hawthorne's experiment in the 20's, researchers' attention has turned towards the question of personnel motivation. The school of "human relations" appeared where several authors carried out their work: Maslow (1954), Herzberg (1965), Mc Gregor (1960), Argyris (2004) etc. These theoreticians proposed numerous notions which all revolved around the idea that the employee can be reconciled with their workplace or better still, the creation of an environment of personal expansion and self-realization there. It corresponds, then, to the management to make the organization a "home" for employees and that the organizational objectives and the personnel challenges pertain to each one of its members. Moreover, a study by Ryan and Deci (2017) highlights the importance of aligning organizational goals with employees' personal values to create a more meaningful and motivating work environment. The model proposes three HRM tools which can point employee motivation towards the objective of the acquisition of know-how, of a remuneration based on performance, of a promotion based on merits and internal communication.

We measure employee motivation through an explicit index: the turnover rate which is an indication of to what extent the social policy HRM have been effective (Kamoche & Mueller, 1998), as well as other indexes which may give rise to the question of "how do you judge the quality of motivation of your employees?"

3.2.1. Remuneration based on performance

Recent research by Wright and Snape (2006) highlights that modern remuneration policies increasingly incorporate elements of variable pay and performance-based rewards to better align with strategic objectives and enhance employee motivation.

Remuneration policies must favor the strategic alignment by adapting itself to the strategic objectives of a society in the event of acquiring know-how. Remuneration can have a direct influence over employee behavior in this sense (Emery & Gonin, 2009). According to the Theory Y by Mc Gregor, the degree of engagement of employees towards the goals of the organization is in function of the rewards associated with their fulfillment. Furthermore, recent findings by Kuvaas (2021) emphasize the effectiveness of linking remuneration to employee performance and development, showing that well-structured reward systems can lead to higher levels of job satisfaction and organizational commitment. Remuneration should effectively be a sign of recognition within the cadre of a contribution/ retribution approach (Peretti, 2010) developed by March and Simon (1958).

Therefore, we shall examine to which degree businesses when facing the challenge of acquiring know-how, alter their system of remuneration upon attributing a greater importance to variable remuneration, in line with the performance of collaborators through productivity bonuses, individual and collective pay raises etc.

To measure this, we will analyze the responses given to the question "How are your collaborators remunerated?" Their replies reveal to what point the system of remuneration takes employee performance into consideration.

H2a: *In the Moroccan context, remuneration based on performance is positively linked to employee motivation.*

3.2.2. Merit-based promotion

Recent studies (Ng & Feldman, 2022) emphasize that a well-structured internal promotions policy is crucial for enhancing employee motivation and retention, as it ensures that career advancement is based on clearly defined merit-based criteria rather than arbitrary decisions.

The strategic alignment of an internal promotions policy supposes that this must be planned and organized within the cadre of career management and not according to random promotions (Peretti, 2010) brought about in order to fill a momentary vacancy. Additionally, research by Schiemann and Lingle (2021) suggests that integrating comprehensive performance metrics and regular feedback into the promotion process can significantly improve the alignment of promotions with organizational goals.

Nonetheless, the capital element concerning the granting of promotions should be merit. Following implicit (self-confidence, willingness to assume responsibility, level of personal implication...) and explicit criteria (productivity, assiduousness, relational ...) a society should be able to classify its personnel in categories of promotional merit. Also, evaluation interviews should not be the sole source of information in regards to the degree of merit; permanent observation and personal contact are valuable sources of knowledge and evaluation of employees under consideration for promotion.

3.2.3. Internal communication

Recent research by Choi and Lee (2022) highlights that fostering open communication channels and integrating feedback mechanisms are essential for enhancing both internal and external knowledge flow within organizations.

"Learning is a collective process which implies interaction and communication" (Ben Slimane & Poix, 2003). Indeed, the enterprise must favor internal communication in every aspect: formal and informal communication, from top to bottom, horizontally and vertically. Likewise, the organization must include its personnel in its strategy and objectives in order to achieve a greater implication.

Additionally, the use of collaborative technologies, as explored by Johnson and Johnson (2021), has been shown to improve the effectiveness of internal communication and knowledge sharing by facilitating real-time interaction and reducing barriers.

Two dimensions of communication must be supported by the direction under the perspective of appropriation of knowledge. According to Emery and Gonin (2009), "internal communication possesses a "utilitarian" or operational dimension indispensable so that each collaborator understand the sense of their mission and their working instructions more clearly as well as a human and interpersonal dimension which contributes to more fluid social relations at the core of the organization, thereby creating a true culture of enterprise and a positive social climate". The former of these dimensions takes on the challenge of formation while the latter implies confidence and systematic exchanges of information.

Furthermore, a society must break down barriers to communication, whether they be organizational barriers tied to hierarchical considerations and bureaucracy or behavioral and attitudinal barriers brought about by the withholding of information – considered as a source of power – mistrust and lack of transparency in those who emit knowledge (engineers, cadres,

middle management). Barriers to communication can be overcome thanks to means such as the setting up of team networks, work in projects, collective evaluation, conflict resolution etc. To the same degree, a society must not neglect the role of new technologies of information and communication which currently have an incalculable value. A society can make use of these through the developing of internet discussion forums, intranet, Facebook and the like. Mailing would be a minimal effort in this sense.

Finally, we have not overlooked the role of external communications, that is, with the partner from which knowledge proceeds. We speak in detail about the Gate Keepers who are relay agents between the outer frontiers of an enterprise and its interior. This role is generally assumed by research and development and human resources services whose role it is to ensure the transmission of knowledge from the outside to the inside of the enterprise.

The importance of external communication in the context of the appropriation of knowledge has been underlined by authors such as Kamoche (1997); Kamoche and Mueller (1998); Gupta and Govindarajan (2000); Schmidt (2005); Badawy (2007), etc.

H2b: *In the Moroccan context, promotion based on merit is positively linked to employee motivation.*

H2c: *In the Moroccan context, internal communication is positively linked to employee motivation.*

3.3. The influence of the capacity of absorption over the transfer of knowledge

Recent studies by Andersson and Löfsten (2022) further emphasize that the effectiveness of knowledge transfer is heavily influenced by the recipient's ability to adapt and integrate new knowledge into their existing processes.

The transfer of knowledge among unities is defined as "a process which covers various stages starting with the identification of knowledge as well as the transfer of knowledge to its final usage by the unit" (Minbaeva & Michailova, 2004). According to Bellon et al. (2000), the degree of knowledge transfer is in function of the capacity of the receiving enterprise to absorb it. Therefore, the weaker the capacity of absorption of the partner in the Global South is, the more it will depend on a unilateral transfer of existing technologies and the more the technology will be incorporated into its equipment or the components to be assembled. Also, according to the degree of development of the enterprises from the South, agreements reached will range from equipment transfers which will follow a continuum that enable the assembly of products conceived in the North, to agreements based on a common conception of goods and then to an independent conception of goods that allow for alliances of creation of technology.

Additionally, recent findings by Cantwell and Santangelo (2021) underscore the importance of developing absorptive capacity through strategic investments in human capital and infrastructure to enhance the effectiveness of knowledge transfer.

The role of the capacity of absorption in a successful transfer of knowledge has been pointed out by several authors (Lyles & Salk, 1996; Lane & Lubatkin, 1998; Gupta & Govindarajan, 2000).

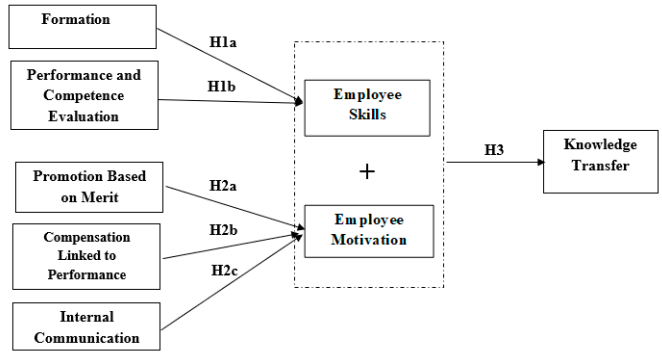

Figure 1. Conceptual model (source: author conception)

H3: *In the Moroccan context, good human resources practices tied to employee competence motivation are positively linked to the capacity of absorption.*

Based on the underlying hypothesis, the conceptual model presented in Figure 1, offers a visual representation that illustrates the relationships and key elements involved in the context under study.

4. Data and methods

In this Section, we will present the scope of our research along with the design of the method employed to measure and analyze dependent and independent variables that arise in our conceptual model.

4.1. Data collection

After having elaborated the questionnaire to cover the terrain of our research, we undertook the second stage to test the survey over a limited sample of subjects. Previously validating this survey, we thereby ensure the coherence and relevance of the questions posed and can then set off on the collection of preliminary data.

Among the cadre of our research, we sought out Moroccan SME in a situation of strategic alliance with foreign partners as the target group of our investigation.

To our knowledge, there is no database that references SMEs involved in strategic alliances, and this lack makes the research stage difficult to carry out. To overcome this barrier, we turned to the following data sources:

- Websites: https://kirex.net/
- Networks of accounting firms and consulting firms
- Direct contacts with certain managers through our personal network
- CGEM.

Through these sources, we contacted 3.152 companies from various industrial sectors in Morocco, by telephone, to create a database of SMEs involved in strategic alliances with foreign partners. We asked the respondents two questions:

- Does your company's annual turnover exceed 75 million MAD?
- Is your company involved in a strategic alliance with a foreign partner?

We found 1.166 strategic alliances concluded by SMEs with foreign partners during the reference period 2014–2024, distributed across various industrial sectors.

We sent the questionnaire out among managers, people in charge of marketing, production and executives of Moroccan SME in situation of strategic alliance who have information over the functioning of such alliances.

We decided to address ourselves to SME which operate in various sectors of industrial activity in different geographic locations in order to ensure that our model isn't unduly influenced by other variables omitted in the literature.

We then proceeded to face-to-face interviews in which we directly contacted SME through our personal networks. We sent out around 420 questionnaires and received 142 replies, a response rate of 33.8%, of which, after verifying these, we kept 108 usable questionnaires which constitutes an acceptable sampling from which acceptable data could be obtained.

4.2. Analyzing the data treatment process

We started out by scrutinizing the validity and trustworthiness of the variables in our research model by the bias of an analysis of its main components, focused on groups of items integrated in a process of capacity of absorption and transfer of knowledge. Afterwards, we exposed a methodology of multi-variable analysis aimed at establishing the causal links between the dependent and independent variables.

4.2.1. The measuring model

Aided by the analysis of main components, we verified the validity and trustworthiness of the measuring scales of our theoretical model in order to simplify the gathering of data and were thereby able to redefine the variables according to the following four stages (Evrard et al., 2003):

- The verification of the feasibility of the factorial analysis through the Bartlett sphericity test which rests upon the nil hypothesis of a correlation among the variables as well as through the Kaiser-Meyer-Olkin (KMO) test which indicates the correlations among different variables used so that the analysis of main components are high enough for these to be determined.

When the KMO is higher than 0,8, that means that the factorial structure is intelligible and stable and that there is a good factorability. If the KMO is between 0,5 and 0,8, it can be concluded that factorability is acceptable yet factorial structure is difficult to interpret and factorability is bad when the KMO is below 0.5.

- The determination of the number of factors to be retained starting from a set of initial variables. Step by step, we eliminate the items which have a weak contribution (equal to or below 0.500) over the main components identified (Evrard et al., 2003). Each analysis of main components is the object of an orthagonal Varimax rotation which enables the value of coefficients of the most correlated variables to be artificially increased while the value of the least correlated variables is reduced.
- The verification of the reliability of the factors of each analysis of main components through a coherence evaluation among the items examined by measuring a same

concept (Igalens & Roussel, 1998; Pittenger, 2003). According to Evrard et al. (2003) and Pittenger (2003), a relaible scale produces the same results when the measurements are repeated whatever the context in which the test is carried out. We use the Cronbach alpha coefficient in our research cadre since it allows the reliability of different questions over the same phenomenon to be measured (Evrard et al., 2003). An alpha over 0.6 is acceptable in the cadre of exploratory studies (Evrard et al., 2003).

- Renaming each component and redefining the research hypothesis to arrive at a refined research model of factorial analysis. See Appendix (Table A1) for a summary of the analysis results for the main components of explanatory variables, including the Chronbach Alpha value and the percentage of variance explained within the set of components.

4.2.2. Test of the hypothesis by analysis of regression

Multiple linear regression is the regression chosen to simultaneously analyze the link among various – more than two-explanatory variables and a variable to explain. "The principle consists of looking into the relationship between the variable to be explained and the other explanatory variables which best account for the reality of the observations. This relationship is expressed through the regression equation which presents the variable to be explained as the sum of each one of the explanatory variables affected of their coefficients to which a constant term is added" (Crauser et al., 1989).

This explanatory method is used to test the hypothesis of our model. This offers us the possibility to test our research model in an overall context and thus determine the importance and significance of each explanatory variable to the variation in the capacity of absorption in SME in Morocco involved in strategic alliances with foreign partners and the effect over the absorption capacity of the transfer of knowledge. It allows us to translate our conceptual model under the following two Equations:

- The capacity of absorption of Moroccan SME in strategic alliances = $\beta 1$ Formation + $\beta 2$ evaluation of performance/competence of employees + $\beta 3$ remuneration based on performance + $\beta 4$ promotion based on merit + $\beta 5$ internal communication + ϵ the transfer of knowledge = $\beta 6$ capacity of absorption + ϵ.

The test over the hypothesis in this work according to this method demands the use of certain indicators such as:

- The verification of the Variance inflation factor (VIF) and the criteria of tolerance to make sure that the model does not contain a useless explanatory variable. The VIF must be below 10 and the tolerance criteria below 1.
- Test Fischer-Snedecor allows for the interpretation of the statistical significance of the results obtained and the contribution of each explanatory variable. Its noted value of significance "Signif F" designates that the threshold Fischer-Snedecor statistic value observed must be below 0.05 at the threshold of 5% or at 0.01 for a threshold value of 1% for the null hypothesis, thereby stipulating the non-existence of a linear relationship between explanatory variables and the variable to be explained be discarded.
- Test Student t allows verification as to whether the estimate obtained for the non-standardized regression coefficient or the non-standardized lambda (B) is significantly far from zero. Its significance must be below 0.05 at a threshold value of 5% or below 0.01 at a threshold value of 1%.

4.2.2.1. Verification of VIF and tolerance

In order to proceed with a verification of VIF and tolerance, a multi-collinearity test is undertaken. We carried out verification of VIF and of tolerance to check for the lack of multi-collinearity, that is, that the model does not contain useless explanatory variables. The VIF must be under 10 and the tolerance criteria less than 1.

In our case, the absence of multicollinearity issues is evident, as demonstrated in the Appendix (Table A2), where tolerance levels range between 0.5 and 0.9, and the VIF remains below 10.

4.2.2.2. Test of the theoretical model

The validation of the hypothesis of the theoretical model leads us to proceed to the significance test of the model. This analysis will be carried out in two stages: an analysis of its overall and then of its individual significance.

4.2.2.2.1. Overall significance test

At first we looked into the overall significance of the model, that is, the set of explanatory variables which have an influence over the dependent variable. This test could be formulated as follows: is there at least one significant explanatory variable?

The determination of the overall significance of the model was carried out by using the Fischer statistic which indicates if the explanatory variables have an influence over the variable to be explained.

The arbitrage was done by using a comparison of the value of the F-statistic estimated as tabulated by Fischer. The SPSS 25 program automatically provided the probability associated with the calculated F-statistic which greatly facilitated analysis, thus to compare the probability associated with the F-statistic at a threshold level of 5% retained should be enough. In the case that a probability linked to the F-statistic is below a threshold value of 5%, then the simple hypothesis H0 (all coefficients are zero) can be discarded for the profile of the alternative hypothesis according to which regression is overall significant.

In our case, for explanatory variables of absorption capacity, the Fischer statistic found by the SPSS 25 program is F = 18.989 and the probability associated thereto is less than 5% (0.00 < 0.05), then the nil hypothesis is discarded and the model is overall significant (See Appendix). Insofar as the intermediate variable of organizational learning, the Fischer statistic calculated is 29.242 and the associated probability is less than 5% (0.00 < 0.05), thus absorption capacity accounts for the transfer of knowledge (see Appendix Table A3).

4.2.2.2.2. Individual significance test

To address the individual significance of the variables, we used the Student statistic directly provided by the SPSS 24 program. The hypothesis of significance of the variable is retained when the threshold is considered as the value of the estimated Student statistic is greater than the one tabulated by Student (see Appendix Table A4). In this research, the rejected probability provided by SPSS 25 at the retained threshold level will be used.

The results of the estimate indicated in the Appendix, show that four variables are statistically significant given the probability attributed to them:

- The variable "Formation" is significant at a threshold level of 1% since the statistical rules of the Student test are respected ($t > 2$, $p = 0.008 < 0.01$).
- The variable "evaluation of performance/competence" is significant at 5% ($t > 2$, $p = 0.013 < 0.05$).

These two variables measure employee competence which enable the development of absorption capacity.

- the variable "Remuneration based on performance" is significant at 1% ($t > 2$, $p = 0.007 < 0.01$).
- the variable «internal communication» is significant at 5% ($t > 2$, $p = 0.021 < 0.05$).

These two variables account for employee motivation which enables them to develop absorption capacity.

Furthermore, the results of this regression show that the significant relations between the receiving entities among Moroccan SME in strategic alliances and their employees' capacity for absorption are highly positive.

5. Results and discussion

After a regression analysis, four factors were deemed determinant in the capacity of absorption of operators in Moroccan SME involved in strategic alliances. Two factors account for employee competence and two others account for motivation. One of these, in the first place, is formation which contributes most to account for operators' absorption capacity ($\beta = 0.753$, $p = 0.00 < 1\%$) an impact over absorption capacity which is seen as highly positive. This result agrees with with our first hypothesis (H1a) along with the literature, namely the works carried out by Daghfous (2004).

Secondly, we establish the positive and determinant contribution of the evaluation of employee performance/competence to the capacity of absorption in SME in a situation of alliance ($\beta = 0.324$, $p = 0.013 < 0.05$) which thereby confirms our second hypothesis (H1b) and is in agreement with the works of Minbeava and Michailova (2004).

Thirdly, we find a positive and significant impact of remuneration based on performance over the capacity of absorption of employees in Moroccan SME involved in strategic alliances with foreign partners ($\beta = 0.287$, $p = 0.007 < 0.01$) which confirms our third hypothesis (H2b) and is compatible with the works of Lund Vinding (2006) and Noblet and Simon (2010).

We note in fourth place, the positive and significant effect of internal communication over employee absorption capacity in Moroccan SME involved in strategic alliances ($\beta = 0.153$, $p = 0.028 < 0.05$) which confirms our fourth hypothesis (H2c).

In fifth place, we register a significant positive effect over the capacity of absorption of the transfer of knowledge in Moroccan SME involved in strategic alliances ($\beta = 0.153$, $p = 0.028 < 0.05$) which agrees with our fifth hypothesis (H3) and is compatible with the work of Marshall and Brady (2001), Liao and Hu (2007). Indeed, the capacity of absorption of a receiving enterprise enables a greater degree of acquisition, assimilation, transformation and effective use of different types of transferred knowledge such as tacit knowledge which is ambiguous and hard to transfer and knowledge that allows for the development and creation of new kinds of knowledge and skills. Table 2 presents a summary of results obtained.

Table 2. Synthesis of hypotheses results (source: author's conception)

Hypotheses	Explanatory variables	Variables to explain	Coefficient β	Significance	*t* Student	Validation
H1a	Formation	Capacity of absorption	0.753	0.008	2.227	Confirmed
H1b	Evaluation of employee performance/competence	Capacity of absorption	0.324	0.013	2.527	Confirmed
H2a	Merit-based promotion	Capacity of absorption	0.005	0.970	0.038	discarded
H2b	Performance-based remuneration	Capacity of absorption	0.287	0.007	2.76	Confirmed
H2c	Internal communication	Capacity of absorption	0.49	0.021	2.358	Confirmed
H3	Capacity of absorption	knowledge transfer	0.345	0.009	2.657	Confirmed

6. Conclusions

The aim of this research was to analyze the mechanisms of human resources management which are susceptible to bringing about an improvement in the degree of the capacity of absorption among Moroccan SME engaged in strategic alliances with foreign partners, the emphasis being placed on the transfer of knowledge to those SME. The study was carried out over 108 strategic alliances established by Moroccan SME in diverse industrial sectors. The importance of this work lies in its contribution to the theoretical as well as the managerial areas by shedding light on mechanisms of human resource management which favor the capacity of absorption of SME involved in asymmetrical strategic alliances.

This study underlines the crucial role played by employees in the process of knowledge transfer by dwelling particularly on the need for a greater capacity of absorption and assimilation of the receiving enterprise which is highly determinant since the flow of knowledge depends heavily on a company's capacity to absorb, assimilate, transform and put into use any and all transferred information. Empirical results suggest that receiving companies which enjoy such capacities tend to better acquire, incorporate and develop as well as to create new knowledge and skills.

At the managerial level, this research offers pertinent indicators for executives of Moroccan SME involved in strategic alliances focused on the transfer of knowledge by urging that these directors address their efforts to facilitate the acquisition, exploitation, development and creation of new skills and knowledge which come from foreign partners. In such alliances, the SME should focus their efforts on strengthening their employees absorption capacity in order to maximize their competitive edge and thereby favor the overall process of acquiring, assimilating, transforming and putting into effective use of knowledge.

Although this study brings significant contributions to the comprehension of factors which may lead to an improvement of the capacity of absorption and transfer of knowledge in the context of strategic alliances in Moroccan SME, it also points out limitations which open new perspectives to further research. A qualitative approach, or even an exploratory

one, could deepen the analysis of mechanisms of management of human resources. Furthermore, the generalization of results to other developing countries, a more extended time span as well as a wide variety of geographic contexts are also potential axes for further research thus offering a broader scope of the phenomenon and enabling significant comparisons among countries.

References

Alamargot, D. (2001). The acquisition of knowledge. In C. Gold (Ed.), *Teaching adolescents* (Psychology manual). Hachette Éducation.

Amachraa, A., & Quelin, B. (2022). *Morocco emergence in global value chains: Four exemplary industries* (Policy Paper No. 07/22). Policy Center for the New South.

Amit, R., & Schoemaker, P. J. (1993). Strategic assets and organizational rent. *Strategic Management Journal*, *14*(1), 33–46. https://doi.org/10.1002/smj.4250140105

Andersson, U., & Löfsten, H. (2022). Knowledge transfer and absorptive capacity: An examination of the role of organizational and human resources. *International Business Review*, *31*(2), 101–115.

Burcharth, A. L. L. A., Lettl, C., & Ulhøi, J. P. (2015). Extending organizational antecedents of absorptive capacity: Organizational characteristics that encourage experimentation. *Technological Forecasting and Social Change*, *90*, 269–284. https://doi.org/10.1016/j.techfore.2013.12.024

Argyris, C. (2004). Double-loop learning and organizational change: Facilitating transformational change. In J. J. Boonstra (Ed.), *Dynamics of organizational change and learning* (pp. 389–402). Wiley. https://doi.org/10.1002/9780470753408.ch19

Armstrong, M., & Taylor, S. (2020). *Armstrong's handbook of human resource management practice* (15th ed.). Kogan Page.

Badawy, M. K. (2007). *The dynamics of change management: Approaches and challenges*. University Press.

Barney, J. B. (1986). Strategic factor markets: Expectations, luck, and business strategy. *Management Science*, *32*(10), 1231–1241. https://doi.org/10.1287/mnsc.32.10.1231

Bellon, B., Ben-Youssef, A., & Plunket, A. (2000). *Euro-Mediterranean industrial alliances and networks: Agreements as modes of acquiring organizational and technological capabilities*. Femise Research Programme.

Benhayoun, L., Ayala, N. F., & Le Dain, M.-A. (2021). SMEs innovating in collaborative networks: How does absorptive capacity matter for innovation performance in times of good partnership quality? *Journal of Manufacturing Technology Management, 32*(8), 1578–1598. https://doi.org/10.1108/JMTM-11-2020-0439

Ben Slimane, S., & Poix, M. (2003). Impact of foreign investments on the development of capabilities in emerging countries. *Francophone Journal of Management*, *293*.

Bierly, P. E., & Daly, P. S. (2007). Sources of external organisational learning in small manufacturing firms. *International Journal of Technology Management*, *38*(1–2), 45–68. https://doi.org/10.1504/IJTM.2007.012429

Blomberg, J., & Löwstedt, J. (2009). Exploring practices for development: Work and informal learning in two IT-related organizations. *Journal of Workplace Learning*, *21*(8), 535–550.

Bouhalleb, N., & Arafet, Y. (2023). Financial inclusion and digital finance in developing economies: A case study of Tunisia. *Journal of Development Economics*, *45*(3), 215–231.

Cantwell, J., & Santangelo, G. D. (2021). Global knowledge transfer and absorptive capacity in emerging markets. *Journal of International Business Studies*, *52*(4), 634–658.

Cegarra-navarro, J. G. (2005). An empirical investigation of organizational learning through strategic alliances between SMEs. *Journal of Strategic Marketing*, *13*(1), 3–16. https://doi.org/10.1080/0965254042000328686

Chen, J., & Lee, Y. (2015). The acquisition of foreign knowledge through inter-firm collaboration and recruitment: Implications for the national growth of businesses in emerging markets. *Journal of International Business Studies*, *46*(8), 1094–1112.

Choi, S. L., & Lee, J. Y. (2022). The role of open communication in knowledge management. *Journal of Knowledge Management*, *26*(4), 901–917.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, *35*(1), 128–152. https://doi.org/10.2307/2393553

Crauser, J.-P., Harvatopoulos, Y., & Sarnin, P. (1989). *Practical guide to data analysis*. Éditions d'Organisation.

Daghfous, A. (2004). Organizational learning, knowledge and technology transfer: A case study. *The Learning Organization*, *11*(1), 67–83. https://doi.org/10.1108/09696470410515733

Doolittle, P. E. (2014). Complex constructivism: A theoretical model of complexity and cognition. *International Journal of Teaching and Learning in Higher Education*, *26*(3), 485–498.

Durand, J. P. (2000). *Organizational culture: Key to successful adaptation*. Edition France Culture.

Emery, Y., & Gonin, F. (2009). *Managing human resources: From theories to tools, an integrated process-compatible concept*. EPFL Press.

Eneroth, M., & Larsson, J. (1996). *Business networks: Case studies and models*. Stockholm Press.

Evrard, Y., Pras, B., & Roux, E. (2003). *Market: Studies and research in marketing* (3rd ed.). Dunod.

Ferreira, E. A., Alves, D. C. S. Q., Parnaíba, F. J. B., de Araújo, R. V., Vieira, G. P., de Alencar, A. P., Ferreira, T. F. P., & Amorim, R. M. L. (2019). Professional-user bond in the family health strategy: Perceptions of hypertensive elderly. *Revista de Psicologia*, *13*(43), 748–760. https://doi.org/10.14295/idonline.v13i43.1561

Ferreira, L., Adams, N., Conselice, C. J., Sazonova, E., Austin, D., Caruana, J., Ferrari, F., Verma, A., Trussler, J., Broadhurst, T., Diego, J., Frye, B. L., Pascale, M., Wilkins, S. M., Windhorst, R. A., & Zitrin, A. (2022). Panic! At the disks: First rest-frame optical observations of galaxy structure at z> 3 with JWST in the SMACS 0723 field. *The Astrophysical Journal Letters*, *938*(L2), 1–9. https://doi.org/10.3847/2041-8213/ac947c

Gagné, M., Forest, J., Gilbert, M. H., Muratore, M., & Moreau, N. (2020). The role of motivation in employee engagement: A review and future directions. *Journal of Organizational Behavior*, *41*(5), 447–467.

García-Sánchez, E., García-Morales, V. J., & Martín-Rojas, R. (2018). Analysis of the influence of the environment, stakeholder integration capability, absorptive capacity, and technological skills on organizational performance through corporate entrepreneurship. *International Entrepreneurship and Management Journal*, *14*, 345–377. https://doi.org/10.1007/s11365-017-0436-9

Grant, R. M. (1996). Prospering in dynamically-competitive environments: Organizational capability as knowledge integration. *Organization Science*, *7*(4), 375–387. https://doi.org/10.1287/orsc.7.4.375

Goswami, A., Sahoo, D., & Nath, S. (2009). The impact of microfinance in reducing vulnerability to poverty: Evidence from India. *Development Studies Research*, *16*(2), 92–107.

Guérin, D. (2011). *Participative management: Issues and practices*. Participante Publishing.

Gupta, A. K., & Govindarajan, V. (2000). Knowledge flows within multinational corporations. *Strategic Management Journal*, *21*(4), 473–496. https://doi.org/10.1002/(SICI)1097-0266(200004)21:4<473::AID-SMJ84>3.0.CO;2-I

Hamel, G. (1991). Competition for competence and interpartner learning within international strategic alliances. *Strategic Management Journal*, *12*(S1), 83–103. https://doi.org/10.1002/smj.4250120908

Hamel, G., & Prahalad, C. K. (1999). *Conquering the future: Building the future of your company rather than suffering it*. Dunod.

Herzberg, F. (1965). The new industrial psychology. *ILR Review*, *18*(3), 364–376. https://doi.org/10.1177/001979396501800306

Hooi, L. W. (2021). Leveraging human assets for MNCs performance: The role of management development, human resource system and employee engagement. *The International Journal of Human Resource Management*, *32*(13), 2729–2758. https://doi.org/10.1080/09585192.2019.1590443

Igalens, J., & Roussel, P. (1998). *Research methods in human resources management*. Economica.

Johnson, D. W., & Johnson, R. T. (2021). Collaborative technologies and their impact on organizational communication. *Information Systems Management*, *38*(3), 215–226.

Kamoche, K. (1997). Knowledge creation and learning in international HRM. *The International Journal of Human Resource Management*, *8*(2), 213–225. https://doi.org/10.1080/09585199700000049

Kamoche, K., & Mueller, F. (1998). Human resource management and the appropriation-learning perspective. *Human Relations*, *51*(8), 1033–1060. https://doi.org/10.1177/001872679805100803

Karman, A. (2020). Understanding sustainable human resource management organizational value linkages: The strength of the SHRM system. *Human Systems Management*, *39*(1), 51–68. https://doi.org/10.3233/HSM-190602

Kedia, B. L., & Bhagat, R. S. (1988). Cultural constraints on transfer of technology across nations: Implications for research in international and comparative management. *The Academy of Management Review*, *13*(4), 559–571. https://doi.org/10.2307/258375

Kogut, B. (1988). Joint ventures: Theoretical and empirical perspectives. *Strategic Management Journal*, *9*(4), 319–332. https://doi.org/10.1002/smj.4250090403

Kuvaas, B. (2021). Performance appraisal and employee motivation: New evidence and insights. *Journal of Management*, *47*(3), 789–812.

Lado, A. (1994). Partnership strategies: Growth perspectives. *Harvard Business Review*, *10*(4), 45–58.

Lane, L. P., Koka, B. R., & Pathak, S. (2006). The reification of absorptive capacity: A critical review and rejuvenation of the construct. *Academy of Management Review*, *31*(4), 833–863. https://doi.org/10.5465/amr.2006.22527456

Lane, P. J., & Lubatkin, M. (1998). Relative absorptive capacity and interorganizational learning. *Strategic Management Journal*, *19*(5), 461–477. https://doi.org/10.1002/(SICI)1097-0266(199805)19:5<461::AID-SMJ953>3.3.CO;2-C

Lane, P. J., Salk, J. E., & Lyles, M. A. (2001). Absorptive capacity, learning, and performance in international joint ventures. Strategic *Management Journal*, *22*(12), 1139–1161. https://doi.org/10.1002/smj.206

Levinson, N. S., & Asahi, M. (1995). Cross-national alliances and interorganizational learning. *Organizational Dynamics*, *24*(2), 50–64. https://doi.org/10.1016/0090-2616(95)90071-3

Liao, S. H., & Hu, D. C. (2007). *Artificial intelligence in organizations: Applications and perspectives*. AI Future Publishing.

Lopez-Cabrales, A., & DeNisi, A. (2021). The road to more sustainable firms in the face of a pandemic: Changes needed in employment relationships. *BRQ Business Research Quarterly*, *24*(3), 241–248. https://doi.org/10.1177/23409444211017913

Lund Vinding, A. (2006). Absorptive capacity and innovative performance: A human capital approach. *Economics of Innovation and New Technology*, *15*(4–5), 507–517. https://doi.org/10.1080/10438590500513057

Lyles, M. A., & Salk, J. E. (1996). Knowledge acquisition from foreign parents in international joint ventures: An empirical examination in the Hungarian context. *Journal of International Business Studies*, *27*, 877–903. https://doi.org/10.1057/palgrave.jibs.8490155

Ma, X., Rui, Z., & Zhong, G. (2023). How large entrepreneurial-oriented companies breed innovation: The roles of interdepartmental collaboration and organizational culture. *Chinese Management Studies*, *17*(1), 64–88. https://doi.org/10.1108/CMS-06-2021-0247

Maslow, A. H. (1954). *Motivation and personality*. Harper & Row.

Marshall, N., & Brady, T. (2001). Knowledge management and the politics of knowledge: Illustration from complex productions and systems. *European Journal of Information Systems*, *10*(2), 99–112. https://doi.org/10.1057/palgrave.ejis.3000398

March, J. G., & Simon, H. A. (1958). *Organizations*. Wiley.

Martínez-Costa, M., Peiró, J. M., & Ruiz, A. (2019). Innovation in knowledge-intensive organizations: The mediating role of absorptive capacity. *Journal of Knowledge Management*, *23*(7), 1263–1282.

Martins, J. T. (2016). Relational capabilities to leverage new knowledge: Managing directors' perceptions in UK and Portugal old industrial regions. *The Learning Organization*, *23*(6), 398–414. https://doi.org/10.1108/TLO-03-2016-0022

McGrath, R. G., MacMillan, I. C., & Venkataraman, S. (1995). Defining and developing competence: A strategic process paradigm. *Strategic Management Journal*, *16*(4), 251–275. https://doi.org/10.1002/smj.4250160402

McGregor, D. (1960). Theory X and theory Y. *Organization Theory*, *358*(374), Article 5.

Minbaéva, D. (2003). Biases in knowledge sharing: A social network perspective. *Journal of Knowledge Management*, *7*(2), 33–51.

Minbaeva, D. B., & Michailova, S. (2004). Knowledge transfer and expatriation in multinational corporations: The role of disseminative capacity. *Employee Relations*, *26*(6), 663–679. https://doi.org/10.1108/01425450410562236

Mohammadi, M., & Wong, K. Y. (2011). The role of knowledge management in improving organizational performance: A review of the literature. *International Journal of Business and Management*, *6*(8), 174–182.

Mahamadou, S. (2016). Knowledge management and organizational performance: A review of the literature. *Journal of Knowledge Management*, *20*(6), 1234–1253.

Ng, T. W. H., & Feldman, D. C. (2022). Internal career mobility and employee outcomes: A review and research agenda. *Journal of Vocational Behavior*, *129*, 103–123.

Noblet, J.-P., & Simon, E. (2010). Capacité d'absorption: Revue de littérature, opérationnalisation et exploration [Absorptive capacity: Literature review, operationalization and exploration]. *Gestion 2000*, *27*(6).

Oman, C. (2020) *Globalization of markets: Challenges for emerging companies*. Global Markets Publishing.

Organisation for Economic Co-operation and Development. (2024). *OECD economic outlook, interim report September 2024: Turning the corner*. OECD Publishing. https://doi.org/10.1787/16097408

Park, J.-H., Suh, H.-J., & Yang, H.-D. (2007). Perceived absorptive capacity of individual users in performance of enterprise resource planning (ERP) usage: The case for Korean firms. *Information & Management*, *44*(3), 300–312. https://doi.org/10.1016/j.im.2007.02.001

Penrose, E. (1959). *The theory of the growth of the firm*. Basil Blackwell.

Peretti, J. (2010). *Digital economy: Issues and perspectives*. Digital Age Publishing.

Permartin, C. (2005). *Growth strategy: Current trends and challenges*. Growth Publishing.

Pittenger, D. J. (2003). *Behavioral research: Design and analysis*. McGraw-Hill.

Popaitoon, S., & Siengthai, S. (2014). The moderating effect of human resource management practices on the relationship between knowledge absorptive capacity and project performance in project-oriented companies. *International Journal of Project Management*, *32*(6), 908–920. https://doi.org/10.1016/j.ijproman.2013.12.002

Purnam, B., Singh, H., & Zollo, M. (2006). Organizing for innovation: Managing the coordination-autonomy dilemma in technology acquisitions. *Academy of Management Journal*, *49*(2), 263–280. https://doi.org/10.5465/amj.2006.20786062

Ritala, P., & Hurmelinna-Laukkanen, P. (2013). Incremental and radical innovation in coopetition – The role of absorptive capacity and appropriability. *Journal of Product Innovation Management*, *30*(1), 154–169. https://doi.org/10.1111/j.1540-5885.2012.00956.x

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Press. https://doi.org/10.1521/978.14625/28806

Rüller, S., Aal, K., Holdermann, S., Tolmie, P., Hartmann, A., Rohde, M., Zillinger, M., & Wulf, V. (2021). Technology is everywhere, we have the opportunity to learn it in the valley: The appropriation of a socio-technical enabling infrastructure in the Moroccan high atlas. *Computer Supported Cooperative Work (CSCW)*, *31*, 197–236. https://doi.org/10.1007/s10606-021-09401-8

Schiemann, W. A., & Lingle, J. (2021). The role of performance metrics in talent management: Aligning promotions with strategic objectives. *Human Resource Management Review*, *31*(4), 100–115.

Schmidt, T. (2005). *Absorptive capacity – One size fits all? A firm-level analysis of absorptive capacity for different kinds of knowledge* (ZEW – Centre for European Economic Research Discussion Paper No. 05-072). https://doi.org/10.2139/ssrn.832904

Schuler, R. & Jackson, S. (1987). *Managing human resources: Contemporary approaches*. HRM Today.

Stock, G. N., Greis, N. P., & Fischer, W. A. (2001). Absorptive capacity and new product development. *The Journal of High Technology Management Research*, *12*(1), 77–91. https://doi.org/10.1016/S1047-8310(00)00040-7

Torres, A. I., Ferraz, S. S., & Santos-Rodrigues, H. (2018). The impact of knowledge management factors in organizational sustainable competitive advantage. *Journal of Intellectual Capital*, *19*(2), 453–472. https://doi.org/10.1108/JIC-12-2016-0143

Valentim, L., Lisboa, J. V., & Franco, M. (2016). Knowledge management practices and absorptive capacity in small and medium-sized enterprises: Is there really a linkage? *R&D Management*, *46*(4), 711–725. https://doi.org/10.1111/radm.12108

Veuglers, R., & Cassiman, B. (1999). Make and buy in innovation strategies: Evidence from Belgian manufacturing firms. *Research Policy*, *28*(1), 63–80. https://doi.org/10.1016/S0048-7333(98)00106-1

Von Krogh, G., Nonaka, I., & Rechsteiner, L. (2012). Leadership in organizational knowledge creation: A review and framework. *Journal of Management Studies*, *49*(1), 240–277. https://doi.org/10.1111/j.1467-6486.2010.00978.x

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, *5*(2), 171–180. https://doi.org/10.1002/smj.4250050207

Wright, P. M., & Snape, E. (2006). Strategic human resource management: A theory of the firm perspective. In *Theoretical perspectives for research in industrial/organizational psychology* (pp. 1–28). Oxford University Press.

Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, *27*(2), 185–203.

APPENDIX

Table A1. Results of the validity and reliability of measurement scales

Components	Alpha Cronbach	Items	% variance explained	no of items
Formation	0.750	types of formation adopted existence of a plan of formation continuing formation formation as part of overall payroll	80%	4
Evaluation of employee performance/ competence	0.783	degree of learning application of new methods by employees.	68%	2
Merit-based promotion	0.730	self-confidence willing to assume responsibility, involvement implication performance assiduousness relations	71.342%	5
Internal communication	0.750	Effort of formation systematic exchange of information. Development of discussion forums on internet, intranet, Facebook….	60.778%	3
Performance-based remuneration	0.737	Adaptation of a remuneration system importance of variable remuneration. Productivity bonuses Individual and collective pay raises	74.56%	4
Capacity of absorption	0.794	investment in R&D. number of patents invented and publications in research developed at other enterprises. number of new ideas produced, new research projects proposed. immediate results in number of patents, announcements of new products, life cycle of products	76.542%	4

End of Table A1

Components	Alpha Cronbach	Items	% variance explained	no of items
Transfer of knowledge	0.754	Degree of learning, of technology, knowledge and know-how acquisition of knowledge to resolve technical problems. acquisition of knowledge and know-how to improve technology Acquisition of knowledge and know-how to develop new technologies and knowledge. Improvement of product quality	76.42%	5

Table A2. Coefficients of collinearity of variables in the research model

Model		Collinearity statistics
		Tolerance
1	(Constant)	
	Formation	.555
	Evaluation performance/competence	.903
	Performance-based remuneration	.537
	Merit-based promotion	.748
	Internal communication	.925
	Capacity of absorption	.850

Note: a. Dependent variable: knowledge transfer.

Table A3. ANOVA Model Regression Index

ANOVA[a]					
Model		Sum of Squares	ddl	Mean Square	F
1	Regression	14907	5	2,9814	18,989
	Student	15,837	101	.157	
	Total	30,744	106		

Notes: a. Predictors: (Constant), training, employee performance/competence evaluation, performance-based remuneration, merit-based promotion, internal communication.
b. Dependent variable: absorptive capacity.

ANOVA[a]					
Model		Sum of Squares	ddl	Mean Square	F
1	Regression	10,387	1	10,387	29,242
	Student	18,648	105	.178	
	Total	29,035	106		

Notes: a. Predictors: (Constant), absorptive capacity. b. Dependent variable: knowledge transfer.

Table A4. Coefficients of individual significance

Coefficients [a]							
Model		Non-standardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics
		B	Error standard	Beta			Tolerance
1	(Constant)	.135	.481		.281	.779	
	Formation	.753	.069	.214	2.227	.008	.555
	Evaluation of Employee Performance/Competence	.324	.128	.246	2.527	.013	.537
	Performance-based remuneration	.287	.104	.336	2.76	.007	.903
	Merit- based promotion	.005	.127	.003	.038	.970	.748
	Internal communication	0.049	.138	0.027	2.358	0.021	.925

Note: a. Dependent variable: absorptive capacity.