

# The Influence of Competence Management on Human Resources Policies: Tunisian Context

Mohamed Ali HEDHILI\* and Sami BOUDABBOUS

University of Sfax, Tunisia

*This research aimed to study the influence of competence management on human resources policies, i.e., recruitment, assessment, training, remuneration, and career management. To this end, an empirical study was conducted via a questionnaire among 124 Tunisian companies. We tested the research hypotheses through linear regression analysis. The results confirm that competence management has a positive influence on human resources policies. The present work provides managers with a useful measurement instrument that can be used in examining human resource policies in their companies to upgrade and improve their employees' competencies.*

**Keywords:** *competence management, human resource policies, quantitative research, Tunisia*

**JEL Classification:** *J24, M10, M12, M51, M52, M53, M54*

## 1. Introduction

Over the last few decades, the business environment has witnessed fast economic, technological, and organizational changes. Hence, companies have been obliged to reconsider their management practices to boost the quality of their products and services, cut the life cycle cost, and satisfy the needs of their customers. Indeed, the concept of competence has led to the emergence of a new management model in the company (Zarifian, 1999).

In recent years, the Tunisian government has been encouraging companies to engage in developing competence management (Arous, 2011; Hedhili and Boudabbous, 2018). This research aimed to study the influence of competence management on human resources policies within Tunisian companies, which has been the focus of a few empirical studies both in Tunisian public (Ben Hassine and Nekka, 2012) and private (Arous, 2011) companies. The research question is stated as follows: *What influence does competence management have on human resource policies?*

Our findings carry implications at both the theoretical and practical levels. Theoretically, it adds insight into the literature review on the relationship between competence management and human resources policies. Practically, this research proposes a measurement instrument for managers that can serve to promote the adaptation and rapid response of companies in response to the demands of the business environment. The remainder of this paper consists of three sections. Section one is devoted to the literature review and hypotheses

---

\* Corresponding Author:

Mohamed Ali Hedhili, ORCID ID: 0000-0002-3481-7874, Doctor of Management, Faculty of Economics and Management, University of Sfax, Tunisia

Article History:

Received 29 April 2020 | Accepted 25 August 2020 | Available Online 3 September 2020

Cite Reference:

Hedhili, M.A. and Boudabbous, S., 2020. The Influence of Competence Management on Human Resources Policies: Tunisian Context. *Expert Journal of Business and Management*, 8(2), pp.121-130.

development. Section two outlines the methodology used. The results of the research are presented and discussed in section three. The paper ends with concluding remarks and future avenues for research.

## 2. Literature Review and Hypotheses Development

### 2.1. The Emerging Context of Competence

The notion of competence is considered to be a new model of management that ensures the adoption of companies' resources to the emerging needs of the business environment (Defélix and Sanséau, 2017). Thus, it plays a central role in the company because it is no longer only a question of implementing knowledge related to prescribed and predefined activities but also dealing with complex problems (Parlier, 1994). This notion has emerged as a response to economic, technological, and organizational changes (Hedhili and Boudabbous, 2018).

Since the 1970s, both companies and employees have experienced changes that are difficult to anticipate. The globalization of the economy and the increased competition have forced employees to acquire new competencies. Therefore, the company must have competent employees to anticipate and meet the specific needs of its customers (Hedhili and Boudabbous, 2020c). Consequently, the company aims to reconstruct its production processes, hence enhancing its productive profitability. Simultaneously, the automation and computerization of production processes have changed the role of the employee within companies (Dejoux, 1999). Indeed, these technological advances have led to a movement of work dematerialization that requires the development of new competencies.

Since the 1980s, the emergence of competence coincided with the evolution of work organization models that oppose the principles of scientific management that fail to guarantee the new production requirements (Zarifian, 1999). Indeed, the notion of competence denounces the monovalence related to work specialization, i.e., lack of employees' autonomy, heavy hierarchy, and decisions' centralization, in favor of enrichment of tasks and versatility. Along with the development of this concept, novel organizational models give more autonomy, responsibility, and recognition to employees to enhance their connection with the company and direct professional mobility (Michaux, 2007).

### 2.2. Definitions of Competence

Starting in the 1980s, the concept of competence has emerged in the field of human resources management. Hedhili and Boudabbous (2018, 2020b, 2020c) state that there are several definitions of competence. According to Durand (2015), this concept results classically from an interaction between knowledge, know-how, and interpersonal skills. The knowledge is acquired through academic diplomas and professional training. Know-how refers to the experience and operational capacities that allow the employee to perform his/ her tasks in a specific work situation. Interpersonal skills relate to behaviors and attitudes that facilitate the integration and success of the employee within the company.

The representation of the classic trilogy that defines competence as the combination of general skills held by an individual considered as a static state (Hedhili and Boudabbous, 2018). Indeed, Zarifian (1999) and Le Boterf (1995) presented different definitions of the notion of competence. According to Le Boterf (1995), it refers to a process of action that ensures the deployment and harmonization of the various skills to handle complex professional situations and resolve given difficulties. Zarifian (1999) presented the concept of competence as a new management model that provides employees with more responsibility and autonomy. He considers that competence is not limited to a simple application of skills in a real work situation but refers to further principles of teamwork (sharing and bringing together).

### 2.3. Problem of Terminology Around the Concept of Competence

The concept of competence has been defined in the literature review in many different ways (Hedhili and Boudabbous, 2018, 2020b, 2020c). However, it is still categorized as a polysemic concept (Dietrich et al., 2010; Besson and Olaba, 2017). Researchers and practitioners use various expressions around this concept (Dietrich et al., 2010).

Furthermore, Zarifian (2001) emphasizes the distinction between competence management and competency-based management:

- **Competence management** is mainly carried out by the department of human resources. It leads to the optimization and rationalization of human resources processes, such as recruitment, training, and forms of recognition that meet the specific needs of employees. The objective of competence management is to analyze and reduce the gaps between required and acquired competences.

- **Competency-based management** views employees as an asset of value creation. Indeed, it is not limited only to the human resources function, but all empowered employees should be involved toward the achievement of company aims. Accordingly, competency-based management puts human resources at the forefront of the implementation of the strategic orientations, which gives the company a competitive advantage.

However, other authors do not share the opinion of introducing distinctions between competence management and competency-based management (Ben Aissa and Sassi, 2013; Defélix, 2003). For Ben Aissa and Sassi (2013), these terminologies are used interchangeably because the notion of competence seems particularly challenging to define unequivocally. Defélix (2003) argues that the profusion of the terminology used around the concept of competence further feeds the confusion around the instruments of competence management. Here, we adopted the appellation competence management because it is widely used in the literature.

## 2.4. Empirical Research and Hypotheses Development

This part aims to investigate the influence of competence management on human resources policies. We target five policies in the field of human resources management, namely recruitment, assessment, training, remuneration, and career management (Figure 1).

According to Khan and Rasheed (2015), recruitment policy consists of appointing the correct individual to each position, who can meet the expected performance and future prospects within the company. The aim of employers is no longer finding stringent concordance between the skills of the employee and the position occupied, but rather his/ her potential for development (Patanakul, 2011). This need can only be satisfied if it is accompanied by various competencies that are not necessarily related to the job position. Thus, we present the following hypothesis:

*H1: Competence management positively influences the recruitment policy.*

The evaluation of competency is a methodical and independent method that aims at judging the way an employee performs his/ her duties (Fabi and Petterson, 1992). The employee must always be informed of the results of his/ her assessment to appreciate the degree of achievement of the company's objectives (Noe et al., 2015). Indeed, the assessment policy is carried out during an exchange between the employee and his/ her supervisor. It aims to highlight his/ her weaknesses and strengths (Tahsildari and Shahnaei, 2015). This allows the company to build a representative image of the current state of competencies acquired by its employees. Hence the following hypothesis:

*H2: Competence management positively influences the assessment policy.*

Today, training represents the main factor in the development of human resources (Loufrani-Fedida, 2011). It plays a vital role in developing an employee's competencies (Kiznyte et al., 2015). The training policy represents a source of information on the competencies needed for an employee to prosper in his/ her career (Antonacopoulou, 1999). According to Shahzad et al. (2016), companies should plan regular training programs if employees do not have the necessary competencies to perform their tasks. Thus, we propose the following hypothesis:

*H3: Competence management positively influences the training policy.*

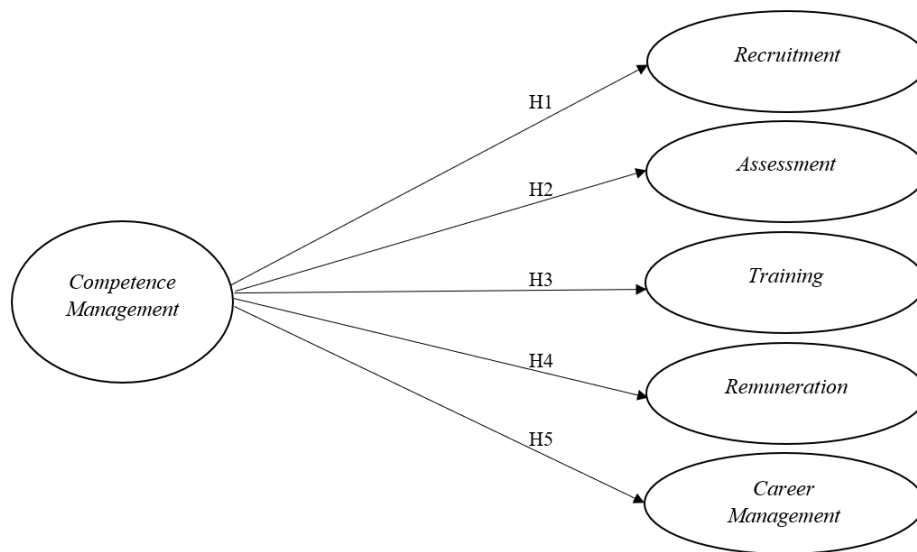
Traditional remuneration based on qualifications and seniority has become unable to cope with changes in the business environment (Huang and Zhu, 2013). Companies are called upon to adopt new compensation approaches that recognize and value the employee competencies in the company's remuneration policies (Hung and Zhu, 2013). Indeed, the remuneration of competencies helps motivate employees to perform their tasks properly (Moustaghfir, 2014). Employees are paid pursuant to the degree of competencies assimilated (Balkin et al., 2015), which encourages them to engage in developing their competencies regularly (Kiznyte et al., 2015). Consequently, the following hypothesis is formulated:

*H4: Competence management positively influences the remuneration policy.*

Conventional reasoning of career plans no longer represents a motivation for employees (Casper and Storz, 2017). Competence management has led companies to consider the professional development of their employees. It is recognized as an essential tool enabling the company to provide career opportunities (Aleï and Shahezaie, 2015) so that they consolidate their employees' competencies and stimulate their employability.

Employees become responsible and proactive in developing their competencies throughout their professional careers (Lloyd-Walker et al., 2016). Thus, we can advance this hypothesis:

*H5: Competence management positively influences career management.*



*Figure 1. The conceptual research model*

### **3. Research Methodology**

#### **3.1. Questionnaire**

In the present work, we opted for the questionnaire as a data collection tool. Despite the validation of the measurement scales chosen in previous works, it was necessary to do the pre-test to check the comprehensibility of the questionnaire in the Tunisian context. To this end, we sought the opinions of about ten human resources managers. The suggestions obtained from the pre-test helped improve the quality of the items. The questionnaire was considered valid after making the necessary changes and improvements.

As part of this research, we chose two methods of administration: face-to-face interview and online survey. This step was conducted in Tunisia from June to September 2019. From a sample of 500 respondents contacted, we obtained 138 responses. A total of 14 questionnaires were discarded because they were not complete. Thus, 124 collected questionnaires were deemed usable. However, the reduced sample size is attributed by time and cost constraints, and the non-collaboration of several managers.

The questionnaire was composed of two sections. The first section contained four descriptive questions that relate to the identity of the surveyed company. It provided information on its geographic location, number of employees, sector of activity, and category. The second section related to the operationalization of the research variables. Items were measured using a 5-level Likert scale ranging from strongly disagree to strongly agree.

#### **3.2. The Operationalization of Research Variables**

First, we resorted to measurement scales proposed by Igalens and Scouarnec (2001) to measure the human resources policy variables. They are mobilized through recruitment, assessment, training, remuneration, and career management (*Appendices*).

However, operationalizing competence management is difficult to establish because there is no universal definition of the concept of competence (Hedhili and Boudabbous, 2018, 2020c). To date, competence management has only been measured in an indirect way (Klarsfeld, 2006). To this end, we measured the degree of implementation of competence management within companies through one single item: training expenditures " *My company attaches great importance to training expenses* " (Colin and Grasser, 2003). Klarsfeld (2006) considers the indicator (training expenditures) as a proxy variable because it operationalizes competence management only indirectly.

#### **3.3. Sample**

The sample of this research was composed of companies that have a human resources department. Indeed, we have adopted the non-probability sampling method in which the sample is selected following a

reasoned choice of individuals from the study population (Evrard et al., 2009). We chose only one manager per company who held a key position in the human resources department.

The determination of the sample size is important for the relevance of the statistical treatment. Hair et al. (2010) propose to calculate the ratio (number of observations/ number of items per scale) to determine the minimum sample size. This ratio is acceptable if it exceeds ten. Here, the ratio condition is verified for all the measurement scales because it always exceeds ten ( $124/6 = 21$ ).

Our sample consisted of 124 companies. Most of the companies were moderately old (72.4%) because they were created between 1980 and 2010. About 62.9% of companies were located in Sfax, 29.0% in Grand Tunis, and 8.1% in Sahel. However, the sample consisted of companies operating in different sectors of activity: industry (58.8%), building and public works (31.6%), and automotive (9.6%). Around 74.3% of companies have a workforce from 50 to 250 employees. Finally, the sample consisted of 107 domestic companies (86.3%). However, 13.7% of the companies are foreign subsidiaries located in Tunisia (Table 1).

**Table 1. Characteristics of companies**

Description	Classification	Frequency	Percentage
Date of creation	Before 1980	14	5.8
	Between 1980 and 2010	89	72.4
	After 2010	21	21.8
	<b>Total</b>	<b>124</b>	<b>100.0</b>
Geographic area	Sfax	78	62.9
	Grand Tunis	36	29.0
	Sahel	10	8.1
	<b>Total</b>	<b>124</b>	<b>100.0</b>
Sectors of activity	Industry	73	58.8
	Building and public works	39	31.6
	Automotive	12	9.6
	<b>Total</b>	<b>124</b>	<b>100.0</b>
Number of employees	Less than 50	9	7.3
	51 to 250	92	74.3
	More than 250	23	18.4
	<b>Total</b>	<b>124</b>	<b>100.0</b>
Category	Domestic	107	86.3
	Foreign subsidiary	17	13.7
	<b>Total</b>	<b>124</b>	<b>100.0</b>

## 4. Statistical Analyses of Empirical Data

### 4.1. Results of Factor Analysis

To test the research hypotheses, it is necessary to perform principal component analysis (PCA) and calculation of Cronbach's alpha. First, PCA is the most recognized method for purification and validation of measurement scales (Evrard et al., 2009). It consists of reducing items to facilitate data interpretation. Second, the calculation of Cronbach's alpha evaluates the reliability of internal consistency among items of the same measurement scale. According to Evrard et al., (2009), the coefficient of Cronbach's alpha is acceptable if it is equal to or greater than 0.7 to assess the internal consistency of measurement scales.

The results of the factor analysis (Table 2) show that the values of the Kaiser – Mayer – Olkin (KMO) index are satisfactory. It proves that the data obtained are factorable. Besides, PCA corroborates the variables uni-dimensionality because the structure factors restore more than 50% of the initial information. Eigenvalues have values more than 1. Finally, the obtained Cronbach's alpha values are also satisfactory. This approves the good internal consistency of the factorial solutions.

**Table 2.** The results of factor analysis

Factorial solutions	KMO	Eigenvalue	Total variance explained	Cronbach's alpha	Items
Recruitment	0.819	2.901	72.522%	0.874	REC3, REC4, REC5
Assessment	0.726	2.276	75.870%	0.841	AS4, AS5, AS6
Training	0.780	2.956	73.894%	0.881	TR2, TR3, TR4, TR5
Remuneration	0.720	2.234	74.456%	0.828	REM2, REM3, REM5
Career management	0.723	2.252	75.054%	0.834	CA1, CA4, CA6

#### 4.2. Results of Hypotheses Testing

We formulated five hypotheses relating to the relationship between competence management and five human resources policies. Each of these hypotheses was tested using linear regression analysis. Fisher test's significance must be less than 0.05 to accept the research hypotheses. The results of the regression demonstrate that the Fisher test is significant ( $p < 0.05$ ). This demonstrates that the quality of the adjustment obtained is satisfactory. Thus, all the hypotheses are verified (H1, H2, H3, H4, H5). The results show that competence management has a positive influence on human resources policies (Table 3).

**Table 3.** The results of hypothesis testing

Hypotheses	Standardized coefficient ( $\beta$ )	Fisher's F-Test	Student's T-Test	Significance level (p)	Results
H1	0.229	6.766	2.601	0.010	Verified
H2	0.308	12.790	3.576	0.001	Verified
H3	0.296	11.697	3.420	0.001	Verified
H4	0.301	12.160	3.487	0.001	Verified
H5	0.340	15.989	3.999	0.000	Verified

#### 4.3. Discussion

Regarding hypothesis (H1), the results of the research indicate that competence management affects recruitment policy positively ( $\beta = 0.229$ ;  $p < 0.05$ ). These results converge with those of Arous (2011) who state that recruitment is increasingly interested in the candidate's competencies. Indeed, the recruitment policy constitutes a method of selecting skilled applicants who can contribute positively to their companies (Bratton and Gold, 2017).

Concerning hypothesis H2, the results show the existence of a positive and significant relationship between competence management and assessment policy ( $\beta = 0.308$ ;  $p < 0.05$ ). The assessment policy provides an analysis of the current state of the employee's competencies. It plays a central role in setting up competence management in the company (Oiry and Sulzer, 2002). According to Noe et al., 2015, assessment enables the company to have an idea of the efficiency of a member of staff. It also helps employees to identify their weaknesses so that they can boost their competencies (Tahsildari and Shahnaei, 2015).

The results of the linear regression analysis validate the third hypothesis (H3): "Competence management influences training policy positively" ( $\beta = 0.296$ ;  $p < 0.05$ ). Training is an integrated instrument in competence management. According to Marfuah and Panudju (2016), Companies have to make suitable training programs available for employees to maintain and further develop their competencies. Such programs enable the individual to assume responsibility for developing the necessary competencies and plan the evolution of his/ her career.

The results of the linear regression analysis show that there is a significant and positive relationship between competence management and remuneration policy ( $\beta = 0.301$ ;  $p < 0.05$ ). The fourth hypothesis (H4) is, therefore, verified. According to Alaei and Shahrezaei (2015), firms are expected to implement competence-based remuneration as it reassures employees to be responsible, autonomous, and to take the initiative. Remuneration recompenses the employee for promoting and preserving his/ her competences by concentrating on how the job is accomplished and the potential capacities rather than only past results (Azmi et al., 2009).

The results of the linear regression analysis confirm hypothesis (H5) supposing that competence management affects career management positively ( $\beta = 0.340$ ;  $p < 0.05$ ). Competence management attaches considerable importance to the discussion of career plans (Colin and Grasser, 2003). Indeed, career development possibilities constitute an instrument of competence management to attract and retain employees

in their companies. Companies have to ensure that their staff obtain new skills and ameliorate their professional projections (Ekrot et al., 2016). Furthermore, they should guarantee suitable career paths (acknowledgment of competences gained, adequate training courses, and rotating jobs) to be able to satisfy the specific requirements of their staff (Alaei and Shahezaei, 2015).

## 5. Conclusions

The main objective of this research was to study the influence of competence management on human resources policies in Tunisian companies. We conducted a quantitative study among 124 companies. We tested the research hypotheses through linear regression analyses. The results confirm that competence management has a positive influence on human resources policies.

The main contributions of this research are both theoretical and practical. Theoretically, this research enriches the existing literature on the concept of competence and highlights the relationship between competence management and human resources policies. Then, this research is, to our knowledge, the first to measure competence management by a proxy variable: training expenses. Finally, the present article applied the measurement scales of Igalens and Scouarnec (2001) to the Tunisian context. On the managerial level, this research provides managers with a tool to measure the degree of implementation of competence management within their companies. Using the measurement indicator of competence management (training expenditures) can help human resources managers to maintain and develop their employees' competencies.

Furthermore, this research presents three limitations. First, we have limited human resources policies to five dimensions: recruitment, assessment, training, remuneration, and career management. Second, the generalization of the results is difficult due to the limited number of responses obtained (124). Thus, larger sample size in future research may increase the external validity of the results. Finally, the absence of direct measurement of competence management can bias the consolidation of research results.

Moreover, this article opens up new avenues of research. First, it would be interesting to carry out studies that compare domestic and foreign firms to find out the cultural similarities and differences concerning the instruments of competence management in companies. Second, the particular choice of a sector of activity will provide a useful contribution. Third, reconducting this research on a single human resources policy could give outstanding results. To conclude, the present work has opened new perspectives in examining competence management in the Tunisian context (Hedhili and Boudabbous, 2018, 2020a, 2020b; 2020c).

## References

- Alaei, M. and Shahezaei, P. S., 2015. A theoretical structure for strategic human resource management in project oriented manufactures. *Cumhuriyet Science Journal*, 36(4), pp. 2088-2096.
- Antonacopoulou, E. P., 1999. Training does not imply learning: The individual's perspective. *International Journal of Training and Development*, 3(1), pp. 14-33.
- Arous, K., 2011. Les pratiques de la gestion des compétences: Cas des grandes entreprises. *Proceedings of the 22th Association Francophone de Gestion des Ressources Humaines – AGRH*, Marrakech, Morocco, October 26-28, 2011.
- Azmi, I. A. G., Ahmad, Z. A. and Zainuddin, Y., 2009. Competency-based pay and service quality: An empirical study of Malaysian public organizations. *Asian Academy of Management Journal*, 14(1), pp. 21-36.
- Balkin, D. B., Roussel, P. and Werner, S., 2015. Performance contingent pay and autonomy: Implications for facilitating extra-role creativity. *Human Resource Management Review*, 25(4), pp. 384-395.
- Ben Aissa, H. and Sassi, N., 2013. La perception de la charge de travail chez les cadres dans une logique de gestion des compétences, *Proceedings of the 24th Association Francophone de Gestion des Ressources Humaines – AGRH*, Paris, France, November 20-22, 2013.
- Ben Hassine, A. and Nekka, H., 2012. La gestion des compétences dans les administrations publiques tunisiennes: Contenu et enjeux pour leur gestion ressources humaines. *Proceedings of the 22th Association Francophone de Gestion des Ressources Humaines – AGRH*, Nancy, France, September 12-14, 2012.
- Bratton, J. and Gold, J., 2017. *Human resource management: Theory and practice*. London: Palgrave Macmillan.
- Casper, S. and Storz, C., 2017. Bounded careers in creative industries: Surprising patterns in video games. *Industry and Innovation*, 24(3), pp. 1-36.
- Colin, T. and Grasser, B., 2003. La gestion des compétences: Un infléchissement limité de la relation salariale. *Travail et Emploi*. 93. pp. 61-73.

- Defélix, C., 2003. Ce que gérer les compétences veut dire. (In) Guenette, A. M., Rossi, M. and Sardas, J. C. (Eds) *Compétences et connaissances dans les organisations*. Lausanne: Société d'Etudes Economiques et Sociales (SEES), pp. 121-128.
- Defélix, C. and Sanséau, P. Y., 2017. Comment des dirigeants – entrepreneurs fabriquent-ils de la gestion des compétences? Enseignements pratiques et théoriques. *Management & Avenir*, 98(8), pp.63-84.
- Dejoux, C., 1999. Organisation qualifiante et maturité en gestion des compétences, *Proceedings of the 4th Association Internationale de Management Stratégique – AIMS*, Châtenay–Malabry, France, May 26-28, 1999.
- Dietrich, A., Gilbert, P. and Pigeyre, F., 2010. *Management des compétences: Enjeux, modèles et perspectives*. 3th edition. Paris: Dunod Editions.
- Durand, T., 2015. L'alchimie de la compétence. *Revue Française de Gestion*, 41(253), pp. 267-295.
- Ekrot, B., Kock, A. and Gemünden, H. G., 2016. Retaining project management competence: Antecedents and consequences. *International Journal of Project Management*, 34(2), pp. 145-157.
- Evrard, Y., Pras, B. and Roux, E., 2009. *Market – Études et recherches en marketing. 4th edition*. Paris: Dunod Editions.
- Fabi, B. and Pettersen, N., 1992. Human resource management practices in project management. *International Journal of Project Management*, 10(2), pp. 81-88.
- Hair, J. F., Black, W., Babin, B. J. and Anderson, R., 2010. *Multivariate data analysis*. 6th edition. New Jersey: Pearson Prentice Hall.
- Hedhili, M. A. and Boudabbous, S., 2018. Organisation par projets et gestion des compétences: Application au cas tunisien. *Doctoral Thesis in Management Science*, Faculty of Economics and Management of Sfax, Tunisia.
- Hedhili, M. A. and Boudabbous, S., 2020a. Recruitment and evaluation practices at the service of project-based organization and competence management: Case of Tunisian companies. *Asian Journal of Social Sciences and Management Studies*, 7(1), pp. 17-24.
- Hedhili, M. A. and Boudabbous, S., 2020b. The impact of project-based organization on competence management practices: Case of Tunisian companies. *International Journal of Research in Business and Social Science*, 9(2), pp. 177-191.
- Hedhili, M. A. and Boudabbous, S., 2020c. Factor analysis of competence management practices: Case of Tunisian companies. *International Journal of Research in Business and Social Science*, 9(2), pp. 177-191.
- Huang M. and Zhu G., 2013. Pay for Competencies on Broadbanding Platform in Human Resource Development. (In) Qi E., Shen J. and Dou R. (Eds) *Proceedings of 20th International Conference on Industrial Engineering and Engineering Management*. Springer: Berlin, Heidelberg, pp. 903-910.
- Igalens, J. and Scouarnec, A., 2001. La gestion par les compétences: Construction d'une échelle de mesure. *Revue de Gestion des Ressources Humaines*, 40, pp. 2-16.
- Khan, A. S. and Rasheed, F., 2015. Human resource management practices and project success, a moderating role of Islamic work ethics in Pakistani project-based organizations. *International Journal of Project Management*, 33(2), pp. 435-445.
- Kiznyte, J., Ciutiene, R. and Dechange, A., 2015. Applying cultural intelligence in international project management. *Proceedings of the 4th International Scientific Conference on Project Management in the Baltic Countries: Project Management Development - Practice and Perspectives*, Riga, Latvia. April 16-17, 2015, pp. 202-213.
- Klarsfeld, A., 2006. La gestion des compétences: Le défi de sa mesure. (In) Defélix, C., Klarsfeld, A. and Oiry, E. (Eds) *Nouveaux regard sur la gestion des compétences*. Paris: Éditions Vuibert, pp. 229-251.
- Le Boterf, G., 1995. *De la compétence: Essai sur un attracteur étrange*. 2th edition. Paris: Edition d'Organisation.
- Lloyd-Walker, B., French, E. and Crawford, L., 2016. Rethinking researching project management. *International Journal of Managing Projects in Business*, 9(4), pp. 903-930.
- Loufrani-Fedida, S., 2011. La gestion des ressources humaines au service de l'articulation entre management des compétences et organisation par projets. *Human Resources Management Review*, 79(1), pp. 24-38.
- Marfuah, U. and Panudju, A. T., 2016. Effectiveness of human resource development program at offshore project. *International Journal of Scientific & Technology Research*, 4(8), pp. 234-239.
- Michaux, V., 2007. Intérêt pour la notion de compétence collective des travaux fondateurs sur les communautés de pratiques de Brownm Duguid et de Wenger, *Proceedings of the 18th Association Francophone de Gestion des Ressources Humaines - AGRH*, Fribourg, Switzerland.



- Moustaghfir, K., 2014. Strategic human resource management: An HR planning toolkit. (In) Dermol, V. and Rakowska, A. (Eds) *Strategic approaches to human resources management practice*. Lublin: To Know Press, pp. 27-51.
- Noe, J. R., Hollenbeck, J. R., Gerhart, B. and Wright, P. M., 2015. *Human Resource Management: Gaining a competitive advantage*. 11th edition, New York: McGrawHill/ Irwin.
- Oiry, E. and Sulzer, E., 2002. Les référentiels de compétences: Enjeux et formes. (In) Brochier, D. (Eds). *La gestion des compétences, acteurs et pratiques*. Paris: Editions Economica.
- Parlier, M., 1994. La compétence au service d'objectifs de gestion. (In) Minet, F., Parlier, M. and Witte, S. (Eds) *La compétence: Mythe, construction ouréalité?*, Paris: Editions L'Harmattan, pp. 91-108.
- Patanakul, P., 2011. Project manager assignment and its impact on multiple project management effectiveness: An empirical study of an IT organization. *Engineering Management Journal*, 23(4), pp. 14-23.
- Shahzad, K., Bajwa, S. U., Ansted, R. B., Mamoon, D. and Khaliq-ur-Rehman., 2016. Evaluating human resource management capacity for effective implementation of advanced metering infrastructure by electricity distribution companies in Pakistan. *Utilities Policy*, 41, pp. 107-117.
- Tahsildari, A. and Shahnaei, S. E., 2015. Enhancing organizational effectiveness by performance appraisal, training, employee participation, and job definition. *European Journal of Business and Management*, 7(12), pp. 56-63.
- Zarifian, P., 1999. *Objectif Compétence: Pour une nouvelle logique*. Rueil-Malmaison: Editions Liaisons.
- Zarifian, P., 2001. *Le modèle de la compétence*. Rueil-Malmaison: Editions Liaisons.

## Appendices

### Appendix I. The operationalization of research variables

research variables	Items
<b>Competence management</b>  (Colin and Grasser, 2003)	<ul style="list-style-type: none"> <li>MC : My company attaches great importance to training expenses.</li> </ul>
<b>Recrutement</b>  (Igalens and Scouarnec, 2001)	<ul style="list-style-type: none"> <li>REC1: During recruitment, what is important is the candidate's diploma and level of training.</li> <li>REC2: During recruitment, what is important is the experience acquired.</li> <li>REC3: During recruitment, what is important is the ability to cooperate with others.</li> <li>REC4: During recruitment, what is important is the ability to adapt and analyze.</li> <li>REC5: During recruitment, what is important is the contribution of the candidate to the company.</li> <li>REC6: During recruitment, what is important are the criteria of autonomy and taking initiative.</li> </ul>
<b>Assessment</b>  (Igalens and Scouarnec, 2001)	<ul style="list-style-type: none"> <li>AS1: I have an annual assessment of my competencies with my supervisor.</li> <li>AS2: My supervisor is interested more in my attitudes.</li> <li>AS3: I have a personalized document which specifies my activities and my competencies.</li> <li>AS4: I am assessed according to my knowledge</li> <li>AS5: I am assessed according to my skills.</li> <li>AS6: I am assessed according to my attitudes.</li> </ul>
<b>Training</b>  (Igalens and Scouarnec, 2001)	<ul style="list-style-type: none"> <li>TR1: I can easily have a training course if I need it.</li> <li>TR2: I have an individual training program.</li> <li>TR3: I regularly participate in training courses.</li> <li>TR4: My employability (ability to find work outside the company) is greater.</li> <li>TR5: My competence level has increased through training.</li> </ul>
<b>Remuneration</b>  (Igalens and Scouarnec, 2001)	<ul style="list-style-type: none"> <li>REM1: My remuneration is based on my proven abilities and not on the job position I hold.</li> <li>REM2: My remuneration is based on my individual contribution to the company.</li> <li>REM3: My remuneration is based on my competencies used in my personal work situation.</li> <li>REM4: My remuneration is based on my job title and position.</li> <li>REM5: My remuneration is based on what I can bring to the company in the future.</li> </ul>

<p><b>Career management</b></p> <p>(Igalens and Scouarnec, 2001)</p>	<ul style="list-style-type: none"> <li>• CA1: I get information about my job and its activities.</li> <li>• CA2: I take less initiative.</li> <li>• CA3: I reach and often exceed the objectives.</li> <li>• CA4: In my work, I seek new ideas and I show creativity.</li> <li>• CA5: I no longer seek to make efforts to develop my competencies.</li> <li>• CA6: In my work, I am enterprising and I am not afraid to act.</li> </ul>
--	---

*Appendix II. Eliminated items in Factor Analysis*

<b>Factorial solutions</b>	<b>Criteria</b>	<b>Eliminated items</b>
Recruitment	<ul style="list-style-type: none"> <li>• Removed items signify a structure factor admitting a Cronbach's alpha value less than 0.7</li> </ul>	RE1, RE2
Assessment	<ul style="list-style-type: none"> <li>• Quality of representation less than 0.5</li> </ul>	AS1, AS2, AS3
Training	<ul style="list-style-type: none"> <li>• Quality of representation less than 0.5</li> <li>• Factorial contribution less than 0.5</li> </ul>	TR1
Remuneration	<ul style="list-style-type: none"> <li>• Measure of Sampling Adequacy (MSA) less than 0.5</li> <li>• Quality of representation less than 0.5</li> </ul>	REM1, REM4
Career management	<ul style="list-style-type: none"> <li>• MSA less than 0.5</li> <li>• Quality of representation less than 0.5</li> </ul>	CA2, CA3, CA5

