

Retention of Drilling Supervisors: HR Levers to Counter Competitive Mobility and Sustain Competitiveness

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Received: 03/09/2025

Accepted: 17/10/2025

Published: 08/11/2025

Abstract:

This article contributes to the strategic reflection on the issue of human resource retention, considered here as a key lever for strengthening the competitiveness of companies operating in high-technical-intensity environments exposed to increasing competitive mobility. Based on a study conducted within the Drilling Division, it seeks to identify internal levers (managerial, organizational, and symbolic) that influence the intention to stay among key technical profiles. The analysis, grounded in a structured questionnaire and rigorous statistical tools, highlights the decisive influence of organizational climate, operational latitude, and recognition mechanisms. The findings also show that retaining these profiles directly contributes to preserving critical knowledge and reducing the risks associated with competitive mobility. The article thus offers a strategic perspective on retention as an active driver of sustainable performance.

Keywords: Retention, key technical profiles; Competitive mobility; strategy; Human resources; drilling

JEL Classification Codes : G11, F51.

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1. INTRODUCTION

In capital-intensive industries, retaining critical competencies is a strategic challenge for competitiveness. The oil drilling sector, increasingly affected by talent volatility, faces heightened pressure to retain key technical profiles such as drilling supervisors and superintendents. These roles, central to operational management and difficult to replace, are highly vulnerable to competitive mobility.

Retention is therefore no longer a simple extension of loyalty policies but a strategic imperative for safeguarding critical knowledge, ensuring operational performance, and reinforcing competitive advantage. This article presents an empirical study conducted within the Drilling Division of the national oil sector, structured into two parts: a theoretical analysis of the concept of human resource retention its scope, mechanisms, typologies, and strategic stakes and a practical analysis of field data and results.

The study examines retention through a strategic lens, focusing on the internal levers (organizational, managerial, and symbolic) that influence the long-term anchoring of key technical profiles. Two hypotheses guide the research:

- Internal levers significantly influence the intention to stay among key technical profiles.
- Retention of key technical profiles contributes to safeguarding critical knowledge and sustaining operational performance, essential determinants of competitiveness.

2. Retention of Human Resources: Definition and Scope of the Concept

2.1 Semantic Clarification: Retention vs. Loyalty vs. Engagement:

In the human resource management literature, the notions of retention, loyalty, and engagement are often used interchangeably, even though they refer to distinct dynamics with differentiated strategic implications.

Retention refers to the organization's ability to keep its employees in post, through explicit levers (compensation, career development, recognition) or implicit ones (organizational culture, loyalty, structural inertia). It is closely

linked to the idea of *organizational staying behaviour* and is empirically reflected in a low rate of undesired departures (Hausknecht et al., 2009).

Loyalty is based on broad organizational actions aimed at reinforcing employees' allegiance, without necessarily incorporating the active dimension of career choice.

Engagement refers to a psychological posture of attachment to the organization, often conceptualized through affective, normative, and continuance dimensions (Meyer & Allen, 1996).

Despite its growing importance in the HRM literature, the concept of retention remains relatively underdefined in operational terms. Conversely, several related terms are frequently mobilized, including retention, turnover and turnover rate, departures and exit rate, and intention to quit. This terminological diversity reflects the plurality of approaches used to analyse a multidimensional phenomenon that is at once quantitative, behavioural, and symbolic.

2.2 Internal Mechanisms of Retention and Typology of Departures: Functional, Dysfunctional, Voluntary, Involuntary

The study of outgoing mobility provides a heuristic entry point for understanding retention. Several seminal works have proposed classifications that distinguish types of departures according to their nature (voluntary or involuntary), their impact (functional or dysfunctional), and their predictability (avoidable or unavoidable).

- a) **Voluntary vs. Involuntary Departure:** This classic distinction dates to March and Simon (1958) in their theory of organizational decisions. Voluntary departure refers to a decision initiated by the employee, generally motivated by career advancement, geographic mobility, or career change. In contrast, involuntary departure is imposed by the employer, including dismissal, contract termination, or retirement.
- b) **Avoidable vs. Unavoidable Departure:** The avoidable/unavoidable (Hom, P. W., Griffeth, R. W., & Sellaro, C. L. (1984)), classification highlights the extent of organizational leverage in addressing employee departures. An avoidable departure can be traced back to organizational factors such as dissatisfaction, workplace conflicts, or ineffective

management practices. An unavoidable departure, on the other hand, lies beyond managerial control and stems from personal circumstances, health issues, or family obligations.

- c) **Functional vs. Dysfunctional Departure:** This distinction was proposed by Dalton and Todor (1979). A functional departure concerns low-performing employees, whose exit may be beneficial to the organization. In contrast, a dysfunctional departure affects high-performing, competent employees or those holding critical positions, such as the key technical profiles considered in this article.
- d) **Intentional vs. Latent Departure:** This typology is grounded in the analysis of progressive disengagement (Morrell, K., Loan-Clarke, J., & Wilkinson, A. 2004). An intentional departure is explicit and deliberately planned; it is generally preceded by a formal statement of resignation or expressed intention to quit. In contrast, a latent departure is more subtle and gradual, characterized by declining organizational commitment and weak signals of withdrawal, without any immediate or formalized declaration.

This typology allows the HR function to move beyond a purely quantitative interpretation of turnover, shifting instead toward a strategic reading of exit dynamics based on their differentiated impact. Retention thereby becomes a targeted talent management instrument, designed to regulate workforce mobility in alignment with the imperatives of continuity, competitiveness, and organizational cohesion.

1.1 Explanatory Factors of Organizational Retention:

The analysis of the determinants of retention rests on the identification of individual, relational, and organizational levers likely to influence an employee's decision to remain within the company. This multi-causal approach, which integrates both structural and psychosocial variables, makes it possible to go beyond mechanistic models and adopt a systemic perspective for managing workforce stability.

- a) **The Role of Proximity Management in Employee Retention:** Considered a vector of relational anchoring, proximity management directly shapes the quality of the employment relationship. According to the Leader–Member Exchange (LMX) model (Gerstner & Day,

1997), a relationship of trust and support between the employee and their immediate supervisor fosters affective commitment. The manager also embodies the psychological contract (Rousseau, 1995), playing a key role in translating implicit expectations into the employment relationship.

b) Quality of Work Life and the Meaning of Work:

Quality of Work Life (QWL) is recognized as a cross-cutting determinant of retention, influencing well-being, perceptions of organizational justice, and the sense of purpose. Hackman & Oldham's Job Characteristics Model (1976) highlights the importance of intrinsic job design (autonomy, feedback, task significance), while Greenhaus & Allen (2011) emphasize the role of work–life balance, particularly for younger generations.

c) Recognition Practices and Reward Policies:

Recognition, in both its material and symbolic dimensions, constitutes a central lever of sustainable engagement. The Perceived Organizational Support (POS) model (Eisenberger et al., 2001) demonstrates that perceived support strengthens employees' sense of moral obligation. Furthermore, the principles of organizational justice distributive, procedural, and interactional reinforce trust and reduce turnover intentions (Brun & Dugas, 2008).

d) Perception of Career Development Opportunities and Autonomy:

Career development prospects represent a powerful anchor for retention. The concept of career self-management (Sturges et al., 2005) emphasizes shared responsibility in career development. Conversely, the perception of career plateauing (Bardwick, 1986; Ference et al., 1977) acts as a trigger for disengagement. Retention therefore depends on the organization's ability to provide visible, flexible, and recognized career paths.

1.2 Strategic Stakes of Retention:

Far from being reduced to a social management variable or a mechanism for regulating turnover, retention must today be regarded as a fully-fledged strategic lever in consolidating competitive advantage. This strategic

dimension rests on several interrelated dynamics that go beyond the mere intention to stabilize headcount.

a) Retention and Human Resource Risk Management:

From the perspective of intellectual capital (Edvinsson & Malone, 1997), an organization's value relies heavily on its intangible assets, particularly the tacit knowledge held by employees. Retention therefore contributes to the preservation of critical knowledge, the assurance of its transmission, and the continuity of organizational routines. The departure of an experienced employee does not only entail a loss of skills, but also an erosion of organizational memory—an issue that is particularly problematic in highly specialized functions. In this sense, retention acts as a lever for managing the risks associated with the volatility of human capital (Boxall & Purcell, 2003).

b) Retention as a Lever of Organizational Competitiveness:

In a context of hypercompetition and skill scarcity (D'Aveni, 1995), retention becomes a strategic factor of differentiation. Organizations capable of sustainably stabilizing their talent position themselves as reliable and learning employers. This capacity reinforces employer branding (Backhaus & Tikoo, 2004) by strengthening the reputation for attractiveness, recognition, and commitment-keeping. Thus, retention asserts itself not only as a tool for stabilization, but also as a symbolic asset generating competitive advantage.

c) Limits and Paradoxes of a Generalized Retention Policy:

It is important to emphasize that retention is not an absolute value. A poorly calibrated retention policy may generate unintended adverse effects, such as:

- Locking internal mobility,
- Creating glass-ceiling effects for emerging talent,
- Indirect costs linked to the maintenance of underperforming or exhausted profiles,
- Resistance to change due to the over-institutionalization of incumbents.

Therefore, retention must be conceived within a differentiated logic, aligned with the strategic value of positions and individuals (Lepak & Snell, 1999), and embedded within a broader framework of talent and critical skills

management. It also requires an open dialogue around career paths, aspirations, and the conditions for sustainable engagement, to avoid forms of forced or artificial loyalty.

4. EXPERIMENTAL

4.1 Research Methodology:

4.1.1 Epistemological Positioning:

This research adopts a realist–constructivist stance, drawing primarily on the Resource-Based View (RBV), which posits that rare, inimitable, and non-substitutable internal resources constitute the foundation of sustainable competitive advantage (Barney, 1991; Wernerfelt, 1984). Applied to the oil drilling sector, this strategic perspective reframes retention not as an HR end, but as an active lever for stabilizing intangible capital and sustaining critical knowledge.

This positioning is enriched by complementary approaches developed in the literature, such as organizational justice models, the psychological contract framework, and the Leader–Member Exchange (LMX) model, which account for subjective logics and symbolic anchoring mechanisms underlying retention behaviours. Taken together, these theoretical frameworks provide the basis for a strategic, managerial, and experiential reading of retention processes within human-intensive organizational contexts.

4.2 Research Design, Data Collection, and Analytical Approach:

Building on this theoretical positioning, a rigorous methodological process was implemented to systematically identify the internal levers of retention. For this purpose, a structured questionnaire, disseminated online via Forms, was designed based on validated theoretical frameworks. The instrument comprised 10 sections totalling 47 items, primarily constructed from the well-established ECPA scale (1984), which was mobilized to assess managerial, organizational, and symbolic dimensions.

All items were adapted to the specific context of the Drilling Division to ensure clarity, operational relevance, and sectoral coherence. Data analysis was structured around three blocks, each aligned with specific hypotheses, thereby enabling a strategic interpretation of the dimensions studied.

The questionnaire was administered using a cross-sectional design, to a representative operational sample composed exclusively of drilling supervisors and superintendents—two occupational categories that play a strategic role in the input of the oil value chain. The data collected were processed with SPSS software, using primarily descriptive statistical tools (frequencies, percentages, cross-tabulations), reliability analyses (Cronbach's alpha), bivariate correlations (Pearson and point-biserial), and logistic regressions to model the intention to stay based on identified internal levers. Finally, the interpretation of quantitative results was consolidated by a qualitative analysis drawing on internal verbatim responses and field observations.

This comprehensive methodological design led to the formulation of targeted HR recommendations, aimed at strengthening retention, safeguarding critical knowledge, and mitigating the risks associated with uncontrolled competitive mobility.

4.2.1 Justification of the Fieldwork / Rationale / Selected Population:

The decision to focus this research on drilling supervisors and superintendents is grounded in several considerations that are both empirical and strategic and closely connected to the dynamics observed within the Drilling Division of the national oil sector.

First, this division has been experiencing increasing mobility among its operational workforce, particularly among high value-added technical profiles. This trend, which has intensified over the years, reflects not only the market attractiveness of internal competencies but also a worrying erosion of accumulated technical capital within core business functions, thereby undermining the continuity of critical expertise.

Second, longitudinal analysis of uncontrolled departures reveals a significant evolution. The year 2018 emerged as a turning point, marked by the suspension of the early retirement scheme following legislative reform. While this reform temporarily stabilized departures, it was followed by a resurgence of exits in other forms (resignations, dismissals), as indicated by internal data collected and analysed graphs.

Fig.1: Evolution of Uncontrolled Departures (2014–2018)

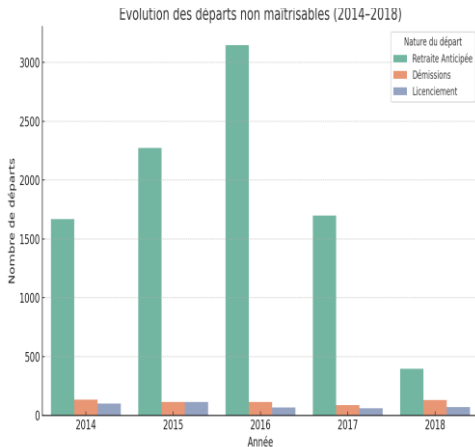
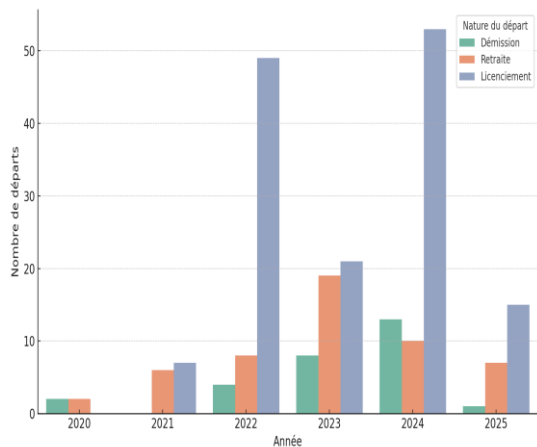


Fig.2: Evolution of Uncontrolled Departures



Source: Research Findings based on statistics

Third, the workforce structure reinforces the relevance of the selected field of study: engineers represent 52% of the Drilling Division’s workforce, among whom drilling supervisors and superintendents alone account for 57%. This strategic core, highly exposed to competition, plays a key role in the operational management of the petroleum value chain.

Accordingly, understanding the specific retention dynamics of this population appears not only justified but essential for shedding light on the challenges of stabilizing critical skills in a sector subject to growing pressures on human capital.

4.3 Results:

4.3.1 Quantitative Analysis:

Out of a total of 482 drilling supervisors and superintendents in the Drilling Division, 147 responded to the questionnaire, representing a significant participation rate. The sample has an average age of 41 years (SD = 6.39), with the majority having more than ten years of seniority. The population is predominantly male, consistent with the actual composition of the division. Overall, representativeness is ensured both socio-demographically and professionally.

In line with our analytical model, three major families of internal levers were considered as independent variables: organizational, managerial, and symbolic levers. The dependent variable selected was the intention to stay, measured in binary form (stay vs. leave). Analyses were conducted according to a block validation logic. Point-biserial correlations were calculated for each dimension, conditional on acceptable internal reliability (Cronbach's alpha). Dimensions that did not demonstrate statistical discrimination were addressed through a qualitative treatment, within a broader interpretative perspective.

4.3.2 Correlation between Workforce Size, Age, Gender, Seniority, and Intention to Stay:

Table 1. Spearman Correlation: Sociodemographic and Intention to Stay

<i>Spearman's Correlations</i>					
Variable		Âge (ordinal)	Ancienneté (ordinal)	Intention (binaire)	Genre (binaire)
1. Âge (ordinal)	n	—			
	Spearman's rho	—			
	p-value	—			
	Lower 95% CI	—			
	Upper 95% CI	—			
2. Ancienneté (ordinal)	n	147	—		
	Spearman's rho	0.346***	—		
	p-value	< .001	—		
	Lower 95% CI	0.196	—		
	Upper 95% CI	0.481	—		
3. Intention (binaire)	n	147	147	—	
	Spearman's rho	0.386***	0.254**	—	
	p-value	< .001	0.002	—	
	Lower 95% CI	0.239	0.096	—	
	Upper 95% CI	0.516	0.399	—	
4. Genre (binaire)	n	147	147	147	—
	Spearman's rho	−0.002	0.070	−0.054	—
	p-value	0.978	0.401	0.517	—
	Lower 95% CI	−0.164	−0.093	−0.214	—
	Upper 95% CI	0.160	0.229	0.109	—

* p < .05, ** p < .01, *** p < .001

Source: Research Findings based on SPSS

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Table 1 presents the Spearman correlations between sociodemographic variables and intention to stay. A moderate and significant correlation is observed between age and intention ($\rho = 0.386$; $p < .001$), as well as between seniority and intention ($\rho = 0.254$; $p = 0.002$). No significant correlation was found between gender * and intention ($p = 0.517$).

4.3.3 Correlation between Organizational Dimensions (Stimulation, Career Development, Clarity) and Intention to Stay:

- The “Stimulation” Dimension

Frequentist Scale Reliability Statistics ▼

Coefficient	Estimate	Std. Error	95% CI	
			Lower	Upper
Coefficient α	0.849	0.024	0.794	0.888

Note. Of the observations, 147 complete cases were used.

The dimension “Perceived Work Stimulation” demonstrates excellent internal consistency ($\alpha = 0.849$; 95% CI [0.794 – 0.888]). It is therefore retained as an organizational lever to be mobilized in the analysis of the determinants of retention.

- The “Career Development / Career Prospects” Dimension

Frequentist Scale Reliability Statistics ▼

Coefficient	Estimate	Std. Error	95% CI	
			Lower	Upper
Coefficient α	0.739	0.044	0.639	0.809

Note. Of the observations, 147 complete cases were used.

The dimension “Career Development and Prospects” shows acceptable internal consistency ($\alpha = 0.739$; 95% CI [0.639 – 0.809]). It is considered an organizational anchoring lever influencing the intention to stay.

- The “Clarity of Professional Expectations” Dimension

*About the relationship between gender and intention to leave, the exploratory analysis does not reveal a significant correlation. However, given the cross-sectional nature of the study and the unbalanced structure of the sample (linked to previously recorded female departures), this result cannot be interpreted as evidence of no effect. A chi-square (χ^2) test could be considered in a complementary study, using a more balanced sample, to verify the existence or absence of a gender effect on turnover intentions.

Frequentist Scale Reliability Statistics ▼

Coefficient	Estimate	Std. Error	95% CI	
			Lower	Upper
Coefficient α	0.730	0.039	0.653	0.807

Note. Of the observations, 147 complete cases were used.

The dimension “Clarity of Professional Expectations” shows good internal consistency ($\alpha = 0.730$; 95% CI [0.653 – 0.807]). It is therefore retained as an organizational lever in the analysis of retention.

Table 2. Correlations between Organizational Levers and Intention to Stay

Variable		Stimulation	Evolution/Perspective de carrières	Clarte_attentes_professionnelle	Intention_Rester
1. Stimulation	R de Pearson	—			
	p-value	—			
	Borne inférieure d'IC 95%	—			
	Borne supérieure d'IC 95%	—			
2. Evolution/Perspective de carrières	R de Pearson	0.575	—		
	p-value	1.387×10^{-14}	—		
	Borne inférieure d'IC 95%	0.476	—		
	Borne supérieure d'IC 95%	1.000	—		
3. Clarte_attentes_professionnelle	R de Pearson	0.534	0.581	—	
	p-value	1.671×10^{-12}	6.445×10^{-15}	—	
	Borne inférieure d'IC 95%	0.429	0.482	—	
	Borne supérieure d'IC 95%	1.000	1.000	—	
4. Intention_Rester	R de Pearson	0.626	0.776	0.638	—
	p-value	1.100×10^{-17}	4.079×10^{-31}	1.788×10^{-18}	—
	Borne inférieure d'IC 95%	0.536	0.715	0.550	—
	Borne supérieure d'IC 95%	1.000	1.000	1.000	—

Note. Tous les tests unilatéraux, pour une corrélation positive.

Source: Research Findings based on SPSS

The table reveals strong, positive, and significant correlations between the three organizational dimensions stimulation ($r = 0.626$; $p < .001$), career development/prospects ($r = 0.776$; $p < .001$), and clarity of professional expectations ($r = 0.638$; $p < .001$) and the intention to stay. These results suggest that when employees perceive their work environment as stimulating, meaningful, and offering clear career development opportunities, their likelihood of remaining within the organization increases significantly.

4.3.4 Correlation between the “Autonomy / Operational Trust” Dimension and Intention to Stay:

- The “Autonomy / Operational Trust” Dimension:

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Frequentist Scale Reliability Statistics

Coefficient	Estimate	Std. Error	95% CI	
			Lower	Upper
Coefficient α	0.862	0.016	0.830	0.894

The “Autonomy / Operational Trust” dimension demonstrates very satisfactory internal consistency ($\alpha = 0.862$; 95% CI [0.830 – 0.894]). It is therefore retained as a relevant managerial lever in the analysis of key profile retention.

Table 3. Correlations between Managerial Levers and Intention to Stay

Variable	Autonomie/ Confiance opérationnelle	Intention (binaire)
1. Autonomie/ Confiance opérationnelle		
R de Pearson	—	
p-value	—	
Borne inférieure d'IC 95%	—	
Borne supérieure d'IC 95%	—	
2. Intention (binaire)		
R de Pearson	0.003	—
p-value	0.487	—
Borne inférieure d'IC 95%	-0.133	—
Borne supérieure d'IC 95%	1.000	—

Note. Tous les tests unilatéraux, pour une corrélation positive.

* $p < .05$, ** $p < .01$, *** $p < .001$, unilatéral

Source: Research Findings based on SPSS

Table 3 reveals the absence of a significant correlation between the “Autonomy / Operational Trust” dimension and the intention to stay ($r = 0.003$; $p = 0.487$). This result suggests that, in this context, this managerial lever does not constitute a determinant of retention, probably due to autonomy being perceived as limited or insufficiently differentiating among drilling staff.

4.3.5 Correlation between Recognition Dimensions (Material / Symbolic) and Intention to Stay:

- The “Recognition (Material / Symbolic)” Dimension

Reconnaissance Matérielle

Reconnaissance symbolique

Frequentist Scale Reliability Statistics ▼

Coefficient	Estimate	Std. Error	95% CI	
			Lower	Upper
Coefficient α	0.839	0.029	0.782	0.897

Frequentist Scale Reliability Statistics

Coefficient	Estimate	Std. Error	95% CI	
			Lower	Upper
Coefficient α	0.848	0.027	0.795	0.901

Table 4. Correlations between Symbolic Levers and Intention to Stay

Variable		Reconnaissance_Symbolique	Reconnaissance_Materielle	Intention_Rester
1. Reconnaissance_Symbolique	n	—		
	R de Pearson	—		
	p-value	—		
	Borne inférieure d'IC 95%	—		
	Borne supérieure d'IC 95%	—		
	Covariance	—		
2. Reconnaissance_Materielle	n	147	—	
	R de Pearson	−0.592***	—	
	p-value	2.799×10^{-15}	—	
	Borne inférieure d'IC 95%	−0.688	—	
	Borne supérieure d'IC 95%	−0.476	—	
	Covariance	−0.378	—	
3. Intention_Rester	n	147	147	—
	R de Pearson	0.521***	−0.268**	—
	p-value	1.286×10^{-11}	0.001	—
	Borne inférieure d'IC 95%	0.393	−0.412	—
	Borne supérieure d'IC 95%	0.630	−0.111	—
	Covariance	0.232	−0.088	—

* $p < .05$, ** $p < .01$, *** $p < .001$

Source: Research Findings based on SPSS

The table reveals a strong positive correlation between symbolic recognition and intention to stay ($r = 0.521$; $p < .001$), suggesting that employees who feel valued, visible, and acknowledged have a significantly higher likelihood of remaining within the organization. This result empirically validates the impact of the symbolic dimension as a strategic lever of retention in highly demanding technical occupations.

Conversely, material recognition shows a significant negative correlation with intention to stay ($r = -0.268$; $p = .001$). This apparent inversion can be explained by a phenomenon of unfavourable comparison: the more employees perceive a gap between their salary expectations and the systems in place, the stronger their intention to leave. This reinforces the idea that perceived injustice in compensation systems, bonuses, benefits, or salary structures, constitutes a powerful irritant, even though these elements are traditionally considered attraction factors rather than retention drivers.

4.3.6 Logistic Regression Analysis by Strategic Block:

To test the predictive power of the different internal levers on intention to stay, three logistic regression models were estimated, each centred on an identified strategic block: organizational, managerial, and symbolic levers.

Table 5. Logistic Regression Analysis of Retention Levers

Block	Included dimension	R ² de Nagelkerke	Largest β Effect	p-value (associated)
Organizational	Stimulation,	0.022	0.333	0.147
	Clarity, Career Development			
Managerial	Autonomy /	0.022	0.487	0.123
	Operational Trust			
Symbolic	Symbolic	0.011	0.221	0.277
	Recognition, Material Recognition			

Source: Research Findings based on SPSS

- Organizational Lever: Stimulation, Clarity, Career Development
- The block integrating stimulation, clarity, and career development explains a moderate share of variance ($R^2 = 0.022$). The strongest predictor in this block is career development ($\beta = 0.333$), but it does not reach the threshold of statistical significance ($p = 0.147$). This suggests that while this lever is strategically relevant, it is not statistically robust within this model.
- Managerial Lever: Operational Latitude (Autonomy / Trust)
- The model based on the managerial dimension “Autonomy / Operational Trust” demonstrates a higher explanatory capacity (Nagelkerke $R^2 = 0.022$) than the null model but remains below the threshold of significance ($p = 0.123$). This result reflects the weak correlation initially observed with intention to stay and supports the idea that this managerial lever, although important, is not a determining factor in the decision to stay in this context.
- Symbolic Lever: Material and Symbolic Recognition

- The symbolic block, composed of both forms of recognition, produces results consistent with the correlation analyses: although the overall regression is not significant ($\Delta\chi^2 = 1.202$; $p = 0.548$), material recognition shows a positive estimate ($\beta = 0.221$), whereas symbolic recognition shows a near-zero effect ($\beta = 0.007$). These results suggest a clear dissociation: financial recognition appears more closely associated with intention to stay than symbolic forms of recognition. This reinforces field data indicating that pay and benefits are cited as the primary drivers of departures toward the competitive sector.

4.3.7 Qualitative Analysis:

In complement to the quantitative results, a qualitative reading was undertaken to give meaning to dimensions that were not statistically correlated but were considered critical in the field. This approach is based on verbatim extracts from exploratory interviews conducted with drilling supervisors and superintendents currently in service, as well as with some who had already left the Division.

Managerial Block: Operational Latitude (Autonomy / Trust)

The feedback collected during the interviews reflects a shared willingness to strengthen margins of autonomy and responsiveness in the field. Several employees expressed a strong attachment to their role, while at the same time identifying constructive areas for improvement:

1. *"We should be given more space to propose, to experiment, even if we make mistakes."*: this statement reflects a desire for proactive autonomy, illustrating employees' openness to innovation and to a positive culture of tolerance for error.
2. *"I do what I am told, not what I think is best."*: This remark highlights an aspiration for greater latitude of action, serving operational performance.
3. *"Greater equity at work would be an essential improvement."* This reflection underscores the importance of a fair balance in the distribution of efforts and responsibilities, serving as a vector of organizational recognition.

These statements highlight an autonomy perceived as restricted, at times reduced to a top-down execution of tasks. Despite high levels of

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responsibility, decision-making leeway appears limited, revealing a tension between formal autonomy and lived autonomy. This asymmetry undermines operational trust, erodes local engagement, and compromises the construction of sustainable anchoring. In this context, the absence of genuine latitude operates as a silent barrier to retention, neutralizing a managerial lever that is nonetheless strategic in high-intensity technical functions.

Organizational Block: significant verbatim excerpts from the interviews

1. *“To retain talent, it is necessary to rely on inspiring leadership and career development opportunities.”* Explicit suggestion of a link between career prospects and HR strategy.
2. *“Train engineers and prepare the next generation.”* Call for proactive career management to safeguard critical knowledge.
3. *“I was never offered progressive training.”* Reflects a lack of support in skill development or mobility.

In this context, the absence of visibility in career pathways constitutes a major barrier to retention, particularly for high-potential profiles. When career management is not formalized, it gives rise to perceptions of injustice and stagnation. In a competitive environment, this lack of projection becomes an accelerating factor of turnover, to the benefit of organizations perceived as more meritocratic or clearer in their promises of advancement.

Recognition Block:

Recognition, in both its symbolic forms (appreciation, valorisation, status acknowledgment) and material forms (salary, benefits, bonuses), emerges as a critical lever of retention in expertise-intensive environments. In our survey, this dimension proved particularly salient, both statistically (strong positive correlations with intention to stay) and in qualitative field feedback.

Testimonies unambiguously express a perceived gap between the effort invested and the recognition received:

1. *“What drives us to leave is first pay, then recognition.”*
2. *“We are not even thanked after 28 days at the rig.”*

Symbolic recognition often appears relegated to the background, perceived as absent or superficial, even though it constitutes a fundamental

element of identity anchoring in demanding occupations. Material recognition, by contrast, is systematically compared with that of foreign companies, perceived as much more attractive:

4. *“The salary difference is huge, at least eight times the Algerian salary.”*

“A single flat bonus, unrelated to performance or seniority.”

In this context, strengthening recognition particularly in financial terms appears as a high-potential strategic lever. Better valuing the effort invested would help limit competitive temptations and sustainably consolidate retention dynamics.

4.3.8 Discussion:

This research, conducted in the drilling sector, is embedded within a strategic dynamic aimed at enhancing the internal levers that foster the retention of key technical profiles, particularly drilling supervisors and superintendents. In an environment where expertise is increasingly in demand, the objective is to identify the conditions conducive to the sustainable anchoring of competencies. By mobilizing a mixed-method approach that combines statistical rigor with qualitative depth, this study provides a constructive perspective on the influence of organizational, managerial, and symbolic levers in consolidating professional commitment and safeguarding critical knowledge.

The sociodemographic variables analysed reveal moderate but significant correlations between age, seniority, and intention to stay. These results reflect a stabilizing effect of professional experience, particularly observable within the career trajectories of technical profiles in the drilling sector. Cross-analysis of the data also highlights relevant generational trends. Generation Y stands out through heightened sensitivity to career projection, rapid recognition, and participation in decision-making. When addressed, these expectations can serve as powerful levers of retention for talents frequently engaged in strategic technical functions.

In parallel, Generation X represents an essential foundation of expertise, whose value must be reinforced through tailored mechanisms of recognition and knowledge transmission. Strengthening this expertise contributes directly to the operational sustainability of the organization. Generation Z,

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though still underrepresented in the sample, nevertheless raises concerns through the renewed demands it introduces upon entry into the profession. Structured support from the point of integration thus emerges as a key retention factor.

At the organizational level, the significant correlations identified between the dimensions of professional stimulation, clarity of expectations, and career prospects confirm the importance of these levers in consolidating the intention to stay. When employees perceive their environment as stimulating, structured, and meaningful, their organizational anchoring is sustainably reinforced. These factors do not merely relate to occasional satisfaction but contribute to the construction of structural capital, in line with the logic of the Resource-Based View (RBV). In a context marked by intensified competition for skills, enhancing the visibility of career pathways, clarifying operational expectations, and providing concrete opportunities for internal development appear as strategic consolidation axes with high added value.

Regarding the dimensions related to operational latitude and managerial support, the statistical analyses did not reveal any significant relationship with the intention to stay. This finding in no way calls into question the importance of the managerial lever but rather invites consideration of the margins for optimization that remain in its implementation. The qualitative analysis indeed highlights that autonomy, as perceived in the drilling sector, often remains framed by strict procedures, at times limiting the expression of local initiatives that would otherwise foster motivation.

This configuration reflects a structured and rigorous organizational model, ensuring a high level of operational control an indispensable requirement in such a technically sensitive environment as drilling. Within this framework, retention appears to depend less on the formal level of autonomy than on the quality of everyday managerial support: presence, regulation of contingencies, and recognition of effort.

Thus, the issue is not to question the foundations of technical supervision, but to evolve proximity management practices toward greater accompaniment, relational agility, and mobilizing leadership. Such an

orientation would help consolidate team commitment, strengthen retention, and support sustainable performance in a sector characterized by significant human and technological challenges.

The analysis of the symbolic lever, broken down into material and symbolic recognition, highlights a notable asymmetry in their influence on retention. Only material recognition shows a significant correlation with the intention to stay. This result, largely corroborated by qualitative feedback from the field, reflects the growing importance of external comparisons, particularly with international companies offering compensation systems perceived as more attractive.

In a highly technical and competitive drilling sector, compensation extends beyond its attraction function. It constitutes a strong marker of recognition, a vector of perceived justice, and a central lever for stabilizing key profiles. For employees, it embodies the valorisation of expertise, hardship, and field commitment. In this context, the absence of complementary mechanisms such as ad hoc bonuses, targeted incentives, or differentiated adjustment systems is perceived as a lack of alignment with the efforts deployed. Over the medium term, this can weaken the engagement dynamic of employees in critical roles.

At the same time, symbolic recognition, although integrated into institutional values, still appears insufficiently embedded in daily practices. Far from being questioned, it would benefit from reinforcement through concrete gestures, visible recognition rituals, and forms of informal valorisation more closely aligned with field realities.

From a Resource-Based View (RBV) perspective, it appears timely to reposition recognition, particularly financial recognition, as a strategic tool of retention capable of safeguarding critical competencies and reinforcing organizational anchoring in an environment marked by intense competitive pressure.

In an environment as demanding as the drilling sector, the challenge is not so much to multiply HR initiatives as to ensure their coherence, clarity, and alignment with the company's strategic priorities. Only under these conditions can retention policies fully contribute to safeguarding intangible

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capital, ensuring the sustainability of critical knowledge, and consolidating operational performance within a dynamic of sustainable competitiveness.

The results obtained in this study confirm the central hypothesis: the retention of key technical profiles relies on the combined activation of organizational, managerial, and symbolic levers. However, the analysis of their relative impact reveals an important strategic insight: organizational dimensions particularly clarity of expectations, professional stimulation, and career prospects play the most structuring role. Material recognition, for its part, acts as a lever of consolidation, reinforcing employees' sense of fairness and valorisation. Managerial levers, although conceptually sound, would benefit from a more embodied and agile implementation in the field to fully realize their potential.

This diagnosis therefore calls for a progressive, pragmatic, and context-sensitive evolution of HR practices, better designed to support retention dynamics in human-intensive occupations such as drilling.

5. CONCLUSION

This research was conducted within a strategic framework aimed at identifying internal levers likely to influence the retention of key technical profiles, particularly drilling supervisors and superintendents in the drilling sector, confronted with increasing competitive mobility. By combining quantitative and qualitative analyses, the study highlighted the differentiated impact of organizational, managerial, and symbolic dimensions on the intention to stay.

The results confirm that retention constitutes an essential prerequisite to any loyalty policy, and that it must be grounded in clearly defined HR levers, coherently activated. Organizational dimensions (stimulation, clarity, career prospects) emerge as the most influential, due to their ability to structure an environment that provides both meaning and projection. Material recognition, strongly expected in a context of international wage competition, also proves to be a determining factor. By contrast, the managerial lever does not produce a significant effect in its current implementation, underscoring the need to rethink the posture of proximity management within a more engaging and transformational logic.

Beyond the validation of hypotheses, this study advocates a segmented approach to retention, attentive to generational trajectories and to the specificities of technical functions. It calls for a shift from a logic of isolated mechanisms to that of an integrated HR promise, where each lever contributes to safeguarding critical knowledge, stabilizing teams, and ultimately ensuring the sustainable competitiveness of the company.

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