

## Engagement and job satisfaction: evidence in the Peruvian commercial sector

### *Compromiso con la tarea y satisfacción laboral: evidencia en el sector comercial peruano*

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**Received on:** 17/01/24 **Revised on:** 04/06/24 **Approved on:** 19/08/24 **Published on:** 01/10/24

**Abstract:** the aim of this research is to explore the components of engagement that are most significant to the job satisfaction of employees in Peru's commercial sector. Questionnaires were distributed online and printed to employees from 25 businesses operating within Lima's commercial sectors. Following an exhaustive literature review, the Utrecht Work Engagement Scale (UWES) was chosen as the survey instrument, resulting in the collection of 260 responses. The participating companies were required to be part of the private sector, and the research adopted a cross-sectional design. The survey was administered free of charge, ensuring complete anonymity for the respondents. The study employed an ordinary least squares model as the instrument, incorporating a quadratic variable for age. The model's results provided the necessary support to demonstrate a close relationship between the engagement variables of challenge ( $\beta = 0.0147$ ,  $p < 0.05$ ), inspiration ( $\beta = 0.0224$ ,  $p < 0.01$ ), flow state ( $\beta = 0.0156$ ,  $p < 0.05$ ), and job satisfaction among commercial employees. Additionally, these variables were graphically analyzed according to the workers' age. A quadratic trend is specifically observed in the relationship between job satisfaction and age. Our findings contribute to the literature by offering a unique perspective on engagement studies, providing valuable insights for the development of improved human management policies.

**Keywords:** challenge, commercial workers, engagement, inspiration, job satisfaction, organizational behavior, flow.

**Resumen:** el objetivo principal de este estudio fue investigar cuáles son los componentes del compromiso con la tarea más relevantes para la satisfacción laboral de los empleados pertenecientes al sector comercial en Perú. Se distribuyeron cuestionarios en línea y en formato impreso a empleados de 25 empresas que operan en los sectores comerciales de Lima. La Escala de Compromiso Laboral de Utrecht (UWES) fue seleccionada como instrumento de encuesta después de una exhaustiva revisión de la literatura, lo que resultó en la recopilación de 260 encuestas. Se establecieron criterios específicos para la participación de empresas, exigiendo que pertenecieran al sector privado, y la investigación adoptó un diseño transversal. Es importante destacar que la encuesta se administró de forma gratuita, garantizando completa anonimidad para los encuestados. El instrumento utilizado en este estudio fue un modelo de mínimos cuadrados ordinarios, incorporando una variable cuadrática para la edad. Los resultados de este modelo brindaron el respaldo necesario para demostrar una estrecha relación entre las variables de compromiso, como el desafío ( $\beta = 0.0147$ ,  $p < 0.05$ ), la inspiración ( $\beta = 0.0224$ ,  $p < 0.01$ ), el flow o la inmersión en el trabajo ( $\beta = 0.0156$ ,  $p < 0.05$ ) y la satisfacción laboral en empleados comerciales. Además, estas variables fueron analizadas gráficamente según la edad de los trabajadores, observándose una tendencia cuadrática específicamente en la relación entre la satisfacción laboral y la edad. Los hallazgos contribuyen a la literatura al presentar una perspectiva diferente sobre el estudio del compromiso, proporcionando valiosos conocimientos para la formulación de políticas de gestión humana más efectivas.

**Palabras claves:** desafío, trabajadores comerciales, compromiso con la tarea, inspiración, satisfacción laboral, comportamiento organizacional, flow.

**Suggested citation:** García-Tamariz, P.E., Mansilla-Mahmud, M.A. and Mateo-Dueñas, R. (2024). Engagement and job satisfaction: evidence in the Peruvian commercial sector. *Retos Revista de Ciencias de la Administración y Economía*, 14(28), 199-215. <https://doi.org/10.17163/ret.n28.2024.02>

## Introduction and state-of-the-art

Engagement and job satisfaction are two fundamental concepts in the literature on organizational behavior and human resources. Engagement, as defined by Schaufeli *et al.* (2002), is conceptualized as a positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption. Vigor implies high levels of energy and mental resilience while working, as well as the willingness to invest effort in work tasks and to persist despite difficulties (Bakker *et al.*, 2008). Dedication refers to being strongly involved in one's work, accompanied by feelings of significance, enthusiasm, inspiration, pride, and challenge (Macey and Schneider, 2008). Absorption, on the other hand, is described as a state of full concentration and deep enjoyment at work, where time seems to pass quickly (Csikszentmihalyi, 1975).

Job satisfaction, defined by Locke (1976), is a positive or pleasurable attitude resulting from the perception of one's job as fulfilling. It is a multidimensional construct that includes factors such as satisfaction with supervision, promotion opportunities, working conditions, relationships with coworkers, and the content of the work itself (Judge *et al.*, 2001). The literature has consistently demonstrated that job satisfaction is related to multiple organizational outcomes, including productivity, turnover, and organizational commitment (Judge and Klinger, 2008).

In the Peruvian context, these dynamics take on particular relevance. Peru, with its emerging economy and constantly evolving labor market, presents a unique scenario for studying engagement and job satisfaction. The commercial sector, one of the most dynamic in the country, is especially relevant given its impact on economic growth and job creation (Instituto Nacional de Estadística e Informática, 2023). Understanding how employees in this sector experience and manage their engagement and satisfaction can offer valuable insights for human resource management and organizational development in Peru.

This study focuses on analyzing the components of engagement that are most relevant to job satisfaction among employees in the Peruvian commercial sector. Specifically, it seeks to

answer the following research questions: Which elements of engagement (vigor, dedication, and absorption) have the greatest impact on job satisfaction? How does job satisfaction vary with the age of employees in the commercial sector? These questions are crucial for developing effective talent management strategies that enhance employee well-being and performance in this specific economic and cultural context.

The document is systematically organized to explore the relationship between job satisfaction and engagement. Following the literature review, the objectives section establishes the study's purpose and specific goals. The methodology section details the research approach, including data collection and measurement, and the use of Ordinary Least Squares (OLS) Analysis. The results section presents the findings from the data analysis, highlighting the identified relationships between job satisfaction and engagement. Finally, the conclusion summarizes the key results and their implications, offering reflections and guidance for future research.

## Engagement

Engagement, as described by Schaufeli *et al.* (2002), is a sustained and impactful positive mental state related to work. This state is characterized by enthusiasm, commitment, and complete absorption, and it is not confined to any specific moment, object, event, person, or action. The first component, vigor, includes behavioral and energetic elements, implying high levels of energy, mental resilience, willingness to invest effort, and perseverance in challenging situations (Gonzalez-Romá *et al.*, 2006; Le Blanc *et al.*, 2021).

Next, dedication involves a strong motivation to work and feelings of being valued, enthusiastic, inspired, proud, and challenged (Madero-Gómez *et al.*, 2021). It manifests in the centrality and importance of work to the individual, along with high levels of enthusiasm, inspiration, and pride. Absorption is defined by complete focus and satisfaction in one's job, effectiveness in task completion, and the sensation that time passes quickly (Salanova *et al.*, 2000; Shimazu and Schaufeli, 2009; Watanabe *et al.*, 2023). This component is

marked by an intense focus and commitment to work, making it difficult to disengage and causing a perception that time flies (Schaufeli and Taris, 2005). It is a cognitive state where the individual achieves deep concentration, potentially losing track of time due to satisfaction and focus during the workday (Llorens *et al.*, 2010).

This sense of intense concentration is also referred to as “flow” by Csikszentmihalyi (1975), who describes it as a comprehensive feeling experienced when individuals engage with complete dedication. Flow is characterized as a state of working at one’s highest capability with strong commitment and ease, where personal abilities align perfectly with the challenges presented (Nakamura and Csikszentmihalyi, 2009). It is considered an “optimal experience,” with these terms often used interchangeably.

## Job satisfaction

The definition of job satisfaction has varied over time, but generally, it refers to the extent to which an individual finds their job enjoyable (Spector, 1997). It has been conceptualized as an assessment of one’s work, involving cognitive aspects as well as emotional responses or overall attitudes toward work (Brief, 1998; Spector, 1997). According to Weiss (2002), job satisfaction is essentially an attitude, and his research differentiates between cognitive aspects, such as emotions, beliefs, and behaviors. He argues that previous measures of job satisfaction have often conflated job perception, which is cognitive, with job satisfaction, which is an emotional assessment.

Hamermesh (2001) conducted research on the influence of job satisfaction in both the United States and Germany, finding that job satisfaction tended to be higher among individuals with higher income levels. These studies have spurred numerous further inquiries into the relationship between wages and job satisfaction.

Recognizing the significance of job satisfaction, efforts have been made to develop workplace policies aimed at enhancing it. For instance, Ellickson and Logsdon (2002) have created policies that consider numerous factors contributing to job satisfaction, categorizing them into two main

domains: environmental background and personal characteristics. Environmental background factors include advancement prospects, compensation, fringe benefits, effective team collaboration and resources, the physical work environment, safety measures, appropriate training, equitable workload distribution, positive relationships with immediate supervisors, performance assessments, and interpersonal connections. Personal characteristics pertain to attributes such as gender and age.

Another approach to job satisfaction is through the concept of happiness at work. This concept has various definitions, making it challenging to define precisely due to its many facets (Zelenski *et al.*, 2008). It is usually defined as the experience of positive emotions (Tkach and Lyubomirsky, 2006; Foncubierta-Rodríguez and Sánchez-Montero, 2019; Roth *et al.*, 2023). The most prominent definition of happiness at work comes from Fisher (2010), who articulates it on three distinct levels. At the transitory level, it involves immediate and fleeting experiences of joy and contentment stemming from work events, as well as the emotions and mood an individual may experience as a result. At the personal level, it focuses on specific aspects of individuals in their work environment, including their levels of engagement, the presence of humor, overall well-being, and positive emotions. Lastly, at the group level, happiness at work is characterized as a collective phenomenon, encompassing team morale, the emotional atmosphere within the group, the presence of humor, collective engagement, and group satisfaction.

## Relationship between job satisfaction and engagement

Engagement in the workplace, as highlighted by Saks (2006) using Social Exchange Theory, is positively correlated with the amount of time employees spend at work. In contrast, job satisfaction, as noted by Macklin *et al.* (2006) through the Job Demands-Resources Model, tends to decrease as the hours spent on the job increase. This suggests that high job demands can enhance engagement if they do not become overwhelming. Conversely, elevated job demands often lead to decreased job satisfaction.

In the literature, it is evident that engaged employees often feel challenged, inspired, and proud in their roles. This emotional state is the result of the interplay between employee engagement and job satisfaction. Karanika-Murray *et al.* (2015), drawing on the Conservation of Resources Theory, found that those who are deeply engaged in their work, seeking energy and dedication, tend to experience satisfaction in their professional endeavours. On the other hand, Britt *et al.* (2005), using the Theory of Job Stress, discovered that employees with a strong commitment to their work and organizations may be adversely affected by negative workplace events, resulting in increased work-related stress.

In a study conducted by Yeh (2013) involving 336 hotel employees from 22 hotels in Taiwan, the relationship between tourism involvement, engagement, and job satisfaction was investigated through the lens of the Engagement Theory. andeh (2013) found a significant and positive connection between job satisfaction and engagement.

In that sense, it is important to consider the leadership style and type, especially transformational leadership (Donkor *et al.*, 2022), as it impacts the relationship between job satisfaction and engagement, based on the Full Range Leadership Theory (Swid, 2016). Additionally, understanding the employee life cycle, framed by the Lifespan Development Theory, is crucial to identifying their specific needs based on age and other factors (Sandhya and Sulphey, 2019).

## Materials and methods

There are several studies that analyses the relationship between engagement and job satisfaction. While numerous studies have delved into the overall correlation, a notable gap in the existing literature pertains to the examination of various facets of engagement within the commercial sector, with a particular emphasis on age-related factors.

This represents a critical void in our understanding of employee well-being, as age can significantly influence individuals' perspectives, expectations, and preferences in the workplace.

By bridging this gap and investigating the nuances of engagement, we can gain deeper in-

sights into the specific factors that contribute to job satisfaction within different demographic segments. This knowledge is not only crucial for academic purposes but also holds practical implications for organizations aiming to tailor their engagement strategies to the diverse needs of their workforce. For this reason, that is why the following objectives are:

- Find out which components of engagement (vigor, dedication and absorption) are most relevant in commercial employees' job satisfaction.
- To find out, if as people age, their job satisfaction changes in a way that isn't necessarily constant but might experience both: growth and decline.

Based on these objectives, the hypotheses for the study are as stated below:

**H1:** There is a positive and significant relationship between vigor, dedication, and absorption in job satisfaction among commercial employees.

**H2:** Job satisfaction varies significantly according to the age of employees in the commercial sector.

To validate these hypotheses, a data collection process is undertaken, as outlined below. This includes the measurement of variables and the application of the Ordinary Least Squares (OLS) model.

## Data collection

The present study is carried out in Peru, a country characterized by its rich cultural diversity and emerging economy. With a population exceeding 33 million inhabitants, Peru stands out for its sustained economic growth in recent decades, with the commercial sector being one of the fundamental pillars of its economy (Economic Activity, 2022). Furthermore, the commercial sector in Peru represents approximately 5.42 % of the country's Gross Domestic Product (GDP), reflecting its importance



in job creation and contribution to economic development (Instituto Nacional de Estadística e Informática, 2023). The city of Lima, the capital of the country, is the main commercial and financial center, concentrating most of the companies participating in this study (Coloma, 2020).

Understanding the dynamics of engagement and job satisfaction in this specific context not only provides valuable insights for human resource management but also offers practical insights for designing organizational policies that promote a more productive and satisfying work environment in the Peruvian commercial sector.

Considering this context and in order to validate the hypotheses, a questionnaire was designed to gather the necessary information to understand the relationships between the variables and subsequently find statistical support to demonstrate the proposed relationships.

Regarding the section on engagement, an adaptation of the questionnaire from the Utrecht Work Engagement Scale (UWES) was used, which has been validated by previous studies (Nunnally and Bernstein, 1994; Salanova *et al.*, 2000). This questionnaire includes items corresponding to three categories: vigor, dedication, and absorption, resulting in a total of ten questions (Schaufeli *et al.*, 2006). Some representative questions were selected for this study, measured using a Likert scale from 1 to 6, where 0 means “never” and 6 means “always”. The questions used are as follows:

1. I am strong and vigorous at my job.
2. I can continue working for long periods of time.
3. Even when things do not go well, I continue working.
4. My job is full of meaning and purpose.
5. My job inspires me.
6. I am proud of the work that I do.
7. My job is challenging.
8. Time flies when I am working.
9. When I am working, I forget everything else around me.
10. I am happy when I am immersed in my work.

To measure job satisfaction, the survey from the study by Macdonald and MacIntyre (1997) was chosen, which validates a questionnaire specifically based on measuring reactions to job characteristics. This model is very versatile, brief, and generic, and can be applied to a wide range of occupational groups. The survey was distributed across different hierarchical levels and included the following questions, measured using a Likert scale from 1 to 6, where 0 means “never” and 6 means “always”:

1. I consider the salary to be good.
2. I receive recognition when I do a good job.
3. I *get along* well with my colleagues.
4. I have job security for the long term.
5. I *get along* well with my supervisor (answer if applicable).
6. My talents and skills are used at work.
7. I have the opportunity to advance within the organization.
8. Overall, I believe the job is good for my physical health.
9. I feel good about my job.

Once the survey was structured, the proposed format was sent to academic professionals; four from the University of Piura and one from the University of Navarra. Additionally, to test the comprehension of the questions, surveys were distributed to various workers with the sought-after profile related to sales and administrative roles. As a result of these validations, corrections were made to the scale, format, and wording style of the questions.

Several invitations were sent to commercial companies in order to participate in this study. Representative commercial companies that showed a willingness to participate in the study aimed to study various hierarchical levels. Questionnaires were distributed online and printed to workers from 25 businesses operating in Lima’s commercial sectors, soliciting their participation in the research project.

Prior to data collection, specific criteria were established. These criteria stipulated that the par-

icipating companies should belong to the private sector, and the study adopted a cross-sectional design. It is important to note that the survey was administered free of charge and guaranteed complete anonymity to the respondents.

## Measurement of variables

In terms of variable measurement, the information was computed in Stata 15. The independent variables in our model correspond to the components of job satisfaction as outlined in the survey utilized for this research. Each of these variables was collected using a Likert scale, although it's important to note that the scales were not uniform across all variables.

It is worth underscoring that the index mentioned earlier was formulated in such a way that it represents a percentage derived from the sum of responses relative to the maximum attainable score. This index considers the number of survey questions answered, as the maximum achievable value is contingent upon the total number of questions addressed.

Furthermore, we made the decision to incorporate control variables into our analysis. These include Gender (coded as 1 for male and 0 for female), Age, Marital Status (with a value of 1 denoting married and 0 denoting otherwise), Children (a binary variable with 1 indicating the presence of children and 0 indicating their absence), Education level, Type of Employment Contract, Tenure within the organization, and a constant term. These control variables were

introduced to help mitigate potential influences on the research findings.

The central variables of the research are job satisfaction as the dependent variable and some statements taken from the UWES engagement survey. To analyze the relationships between these variables, job satisfaction was defined, and the index was constructed with the following equation:

## Job satisfaction index

$$\text{Job satisfaction index} = \frac{\sum_{i=1}^9 S_i}{4(9 - N_1)}$$

Where:

$S_i$  : variables that contain job satisfaction.

$N_1$  : number of unanswered questions in the job satisfaction section.

To validate the survey, a concise examination of the psychometric characteristics of the instruments was conducted. This involved assessing the survey's consistency and reliability. It's noteworthy that there was a complete absence of missing data in any of the surveys, resulting in 100,00% data completeness.

For the reliability assessment, we applied Cronbach's alpha statistic (as shown in Table 1), which provides a measure of reliability for variables associated with a specific construct. In the case of the job satisfaction index, an impressive Cronbach's alpha value of 0.894 was achieved. This indicates a high degree of reliability and internal consistency within the scale.

**Table 1**

*Reliability statistics on job satisfaction and job commitment*

| Alfa de Cronbach | Cronbach's alpha considering each item | Number of items |
|------------------|--|-----------------|
| 0,894            | 0,805                                  | 9               |
| 0,917            | 0,868                                  | 10              |

## Ordinary least squares

For the regression, it was decided to use the ordinary least squares model with a quadratic variable, age. The main form of each regression to be estimated is presented below:

Job satisfaction<sub>i</sub> =

$$\beta_0 + \beta_2\Pi + \beta_2Y + \beta_3\text{Age}_i + \beta_4\text{Age}_i^2 + \varepsilon$$

Where:

- Job satisfaction<sub>i</sub>: is the job satisfaction index.

- $\Pi$ : it is a vector that represents the variables that composes worker's engagement. Among them, there are: strong and vigorous at work, works for long periods, works when things go wrong, work is significant, work inspires the worker, the worker is proud of his/her work, work is challenging, time flies while working, forgets everything, happy and absorbed work (flow).
- $\Upsilon$ : it is a vector that represents the control variables of the model, which are time of service in months, marital status, and whether they have children.
- $\text{Age}_i^2$ : is the age of the employee.
- $\text{Age}_i$ : is the employee's age squared.
- $\beta_0$ : intercept of the equation.

- $\varepsilon$ : regression error.

## Results and discussion

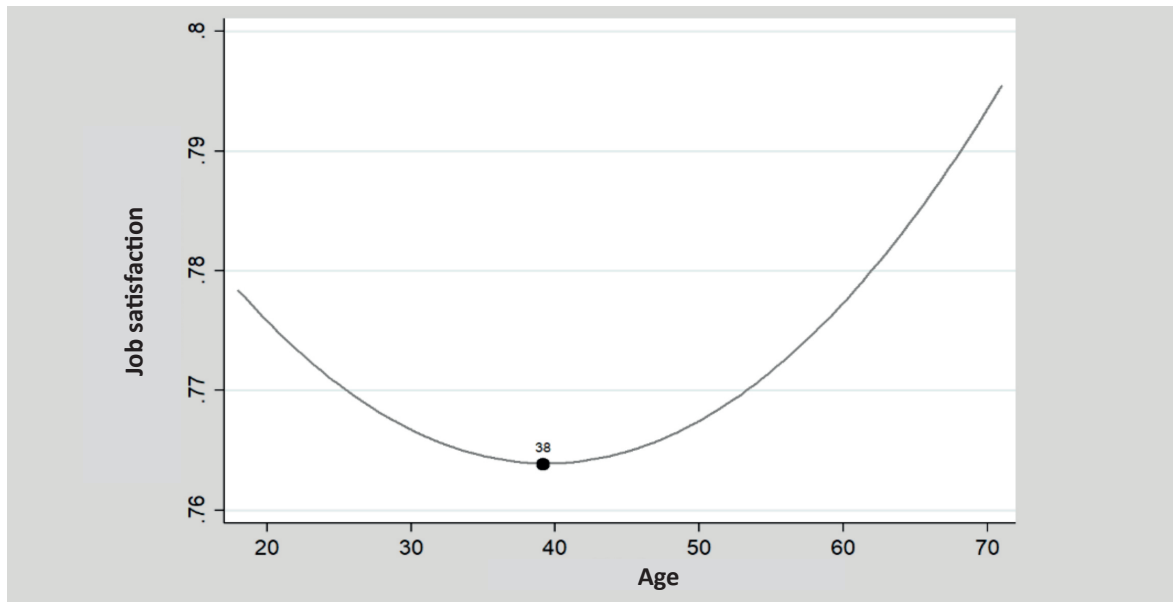
The descriptive statistics have been computed, focusing on key variables. Table 2 shows a wide range of ages among the participants, giving us insights into the diversity of employee ages. Both age and years of service show a broad range of responses, indicating a variety of experiences and lengths of employment among the workforce. It is important to note that 43,00% of the sample are women and 57,00% are men. This variability highlights the complexity of the workforce and the need to understand employees' perspectives and contributions in detail.

**Table 2**  
Overview of the main variables

| Variable                              | Mean  | N   | Min  | Max   | Standard deviation | Variance |
|---------------------------------------|-------|-----|------|-------|--------------------|----------|
| Job satisfaction                      | 0.78  | 260 | 0.28 | 1     | 0.11               | 0.01     |
| Age                                   | 32.68 | 257 | 18   | 71    | 9.38               | 88.01    |
| Years of Education                    | 15.94 | 256 | 2.5  | 29    | 3.85               | 14.83    |
| Time of service (in months)           | 80.5  | 260 | 0.02 | 370.5 | 4.98               | 24.82    |
| Strong and vigorous at work           | 4.69  | 260 | 3    | 6     | 0.12               | 0.02     |
| Works for long periods                | 4.74  | 260 | 3    | 6     | 0.11               | 0.01     |
| Works when things go wrong            | 4.61  | 260 | 3    | 6     | 0.10               | 0.03     |
| Work is significant                   | 4.45  | 260 | 3    | 5     | 0.09               | 0.04     |
| Work inspires the worker              | 4.52  | 260 | 3    | 4     | 0.16               | 0.01     |
| The worker is proud of his/her work   | 4.64  | 260 | 3    | 6     | 0.19               | 0.03     |
| Work is challenging                   | 4.76  | 260 | 3    | 5     | 0.10               | 0.02     |
| Time flies while working              | 4.64  | 260 | 3    | 6     | 0.17               | 0.02     |
| Forgets everything while working      | 4.47  | 260 | 3    | 6     | 0.12               | 0.05     |
| Happy when is absorbed at work (flow) | 4.52  | 260 | 3    | 5     | 0.11               | 0.01     |

Figure 1 illustrates the quadratic trend observed in the data on job satisfaction. A notable inflection point appears at the age of 38, where

job satisfaction declines from ages 18 to 38, and then shows an upward trajectory beyond 38.

**Figure 1***Job satisfaction quadratic trend*

To address potential multicollinearity among the model's explanatory variables, a thorough correlation matrix analysis was conducted. The results, shown in Table 3, indicate that no co-

relation exceeds the threshold of 0.5. This lack of strong correlations alleviates concerns about multicollinearity, ensuring the reliability of the model's variable relationships and reinforcing the robustness of our analytical approach.

**Table 3***Correlation matrix*

| # | Variable                            | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|---|-------------------------------------|------|------|------|------|------|------|------|------|---|----|----|----|----|----|----|----|----|
| 1 | Strong and vigorous at work         | 1    |      |      |      |      |      |      |      |   |    |    |    |    |    |    |    |    |
| 2 | Works for long periods              | 0.49 | 1    |      |      |      |      |      |      |   |    |    |    |    |    |    |    |    |
| 3 | Works when things go wrong          | 0.45 | 0.56 | 1    |      |      |      |      |      |   |    |    |    |    |    |    |    |    |
| 4 | Work is significant                 | 0.42 | 0.40 | 0.40 | 1    |      |      |      |      |   |    |    |    |    |    |    |    |    |
| 5 | Work inspires the worker            | 0.39 | 0.36 | 0.30 | 0.40 | 1    |      |      |      |   |    |    |    |    |    |    |    |    |
| 6 | The worker is proud of his/her work | 0.41 | 0.28 | 0.31 | 0.49 | 0.42 | 1    |      |      |   |    |    |    |    |    |    |    |    |
| 7 | Work is challenging                 | 0.33 | 0.27 | 0.26 | 0.45 | 0.40 | 0.40 | 1    |      |   |    |    |    |    |    |    |    |    |
| 8 | Time flies while working            | 0.24 | 0.31 | 0.17 | 0.33 | 0.35 | 0.37 | 0.34 | 1    |   |    |    |    |    |    |    |    |    |
| 9 | Forgets everything while working    | 0.08 | 0.16 | 0.08 | 0.11 | 0.12 | 0.08 | 0.19 | 0.36 | 1 |    |    |    |    |    |    |    |    |



| #  | Variable           | 1     | 2     | 3     | 4     | 5     | 6    | 7    | 8     | 9     | 10   | 11     | 12   | 13    | 14   | 15    | 16   | 17 |
|----|--------------------|-------|-------|-------|-------|-------|------|------|-------|-------|------|--------|------|-------|------|-------|------|----|
| 10 | Flow at work       | 0.35  | 0.33  | 0.24  | 0.35  | 0.41  | 0.42 | 0.36 | 0.32  | 0.31  | 1    |        |      |       |      |       |      |    |
| 11 | Sex                | 0.06  | -0.03 | -0.13 | -0.06 | -0.06 | 0.01 | 0.07 | -0.06 | -0.01 | 0.00 | 1      |      |       |      |       |      |    |
| 12 | Age                | 0.11  | 0.06  | 0.01  | 0.11  | 0.13  | 0.14 | 0.09 | 0.10  | 0.04  | 0.20 | 0.16   | 1    |       |      |       |      |    |
| 13 | Service time       | -0.03 | -0.05 | -0.04 | 0.03  | 0.03  | 0.08 | 0.07 | 0.04  | 0.03  | 0.11 | 0.24   | 0.55 | 1     |      |       |      |    |
| 14 | Marital Status     | 0.15  | 0.06  | 0.03  | 0.11  | 0.12  | 0.07 | 0.06 | 0.07  | -0.04 | 0.09 | 0.16   | 0.50 | 0.25  | 1    |       |      |    |
| 15 | Has kids           | 0.20  | 0.14  | 0.09  | 0.05  | 0.09  | 0.11 | 0.07 | 0.04  | -0.01 | 0.14 | 0.13   | 0.39 | 0.24  | 0.37 | 1     |      |    |
| 16 | Years of education | 0.08  | 0.08  | 0.09  | 0.11  | 0.16  | 0.00 | 0.09 | 0.08  | -0.02 | 0.07 | -0.21% | 0.03 | -0.11 | 0.10 | -0.07 | 1    |    |
| 17 | Type of contract   | 0.05  | 0.02  | 0.02  | 0.13  | 0.15  | 0.11 | 0.14 | 0.06  | 0.02  | 0.05 | 0.01   | 0.18 | 0.29  | 0.17 | 0.07  | 0.08 | 1  |

The regression results, detailed in Table 4, illuminate the factors influencing job satisfaction. Notably, within the dedication variable, both inspiration at work and engaging tasks emerge as significant contributors to heightened job satisfaction, as evidenced by their positive coefficients. This indicates that an increase in these components correlates with an increase in job satisfaction. Therefore, the first hypothesis is partially rejected, as not all variables within each component (dedication, absorption, vigor) were significant.

An intriguing finding in the absorption category highlights the significance of feeling 'happy and absorbed at work (flow)', indicating a positive impact on job satisfaction.

When considering age as a control variable, a significant concave quadratic trend is observed. This suggests an inflection point where job satisfaction initially rises with age but begins to decline beyond a certain age. Thus, hypothesis 2 is not rejected, as there is a significant quadratic relationship among employees in the commercial sector studied.

Additionally, the variable related to having children shows significance with a negative coefficient. This suggests that having children is associated with a decrease in job satisfaction, possibly due to the time demands imposed by childcare responsibilities.

**Table 4**  
*Regression of engagement variables and job satisfaction*

| Job satisfaction                    |                     |
|-------------------------------------|---------------------|
| <b>Vigor</b>                        |                     |
| Strong and vigorous at work         | -0.00801<br>(0.282) |
| Works for long periods              | 0.0107<br>(0.163)   |
| Works when things go wrong          | 0.00054<br>(0.943)  |
| <b>Dedication</b>                   |                     |
| Work is significant                 | 0.00475<br>(0.585)  |
| Work inspires the worker            | 0.0224**<br>(0.008) |
| The worker is proud of his/her work | 0.00764<br>(0.364)  |
| Work is challenging                 | 0.0147*<br>(0.024)  |
| <b>Absorption</b>                   |                     |
| Time flies while working            | 0.00976             |

|                                       | Job satisfaction |
|---------------------------------------|------------------|
|                                       | (0.138)          |
| Forgets everything while working      | -0.000706        |
|                                       | (0.882)          |
| Happy when is absorbed at work (flow) | 0.0156*          |
|                                       | (0.022)          |
| Sex (1=Female)                        | 0.0185           |
|                                       | (0.068)          |
| Age                                   | 0.0210**         |
|                                       | (0.003)          |
| Age <sup>2</sup>                      | -0.0320*         |
|                                       | (0.017)          |
| Service time                          | -0.000531        |
|                                       | (0.186)          |
| Marital status                        | 0.017            |
|                                       | (0.156)          |
| Has children (1=Yes)                  | -0.00694**       |
|                                       | (0.009)          |
| Years of education                    | 0.000177         |
|                                       | (0.992)          |
| Type of contract                      | 0.0167           |
|                                       | (0.519)          |
| Constant                              | 0.421***         |
|                                       | (0.000)          |
| N                                     | 260              |
| R <sup>2</sup>                        | 0.308            |
| F (22.437)                            | 28,67            |
| Prob > F                              | 0,037            |

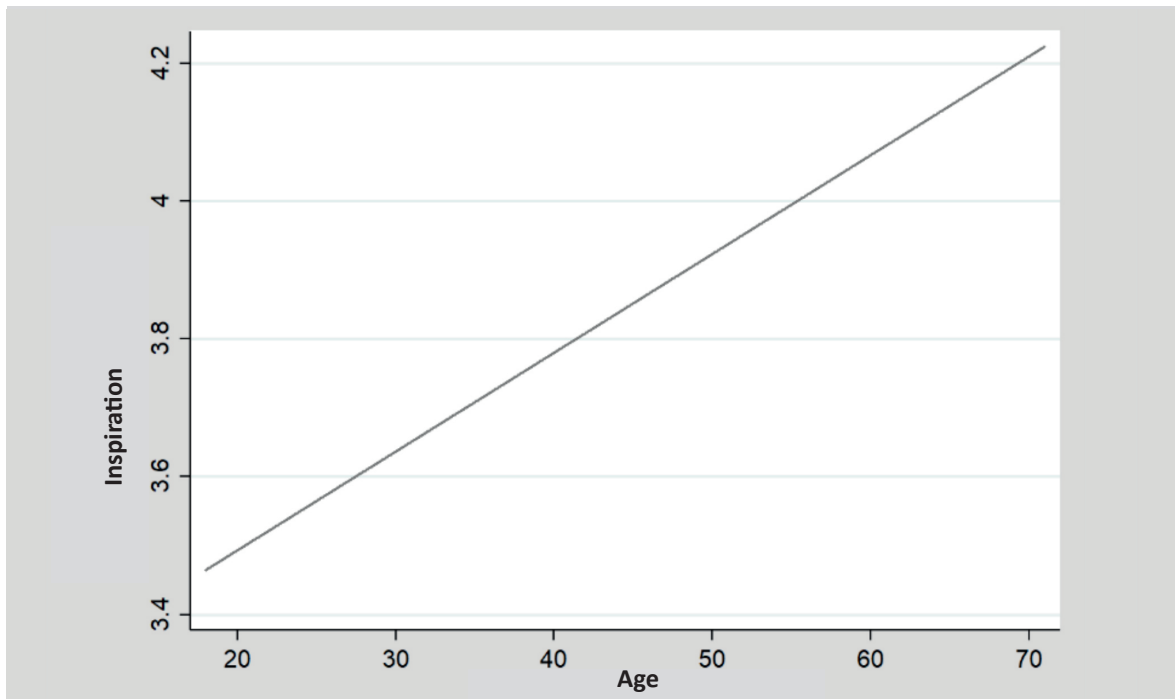
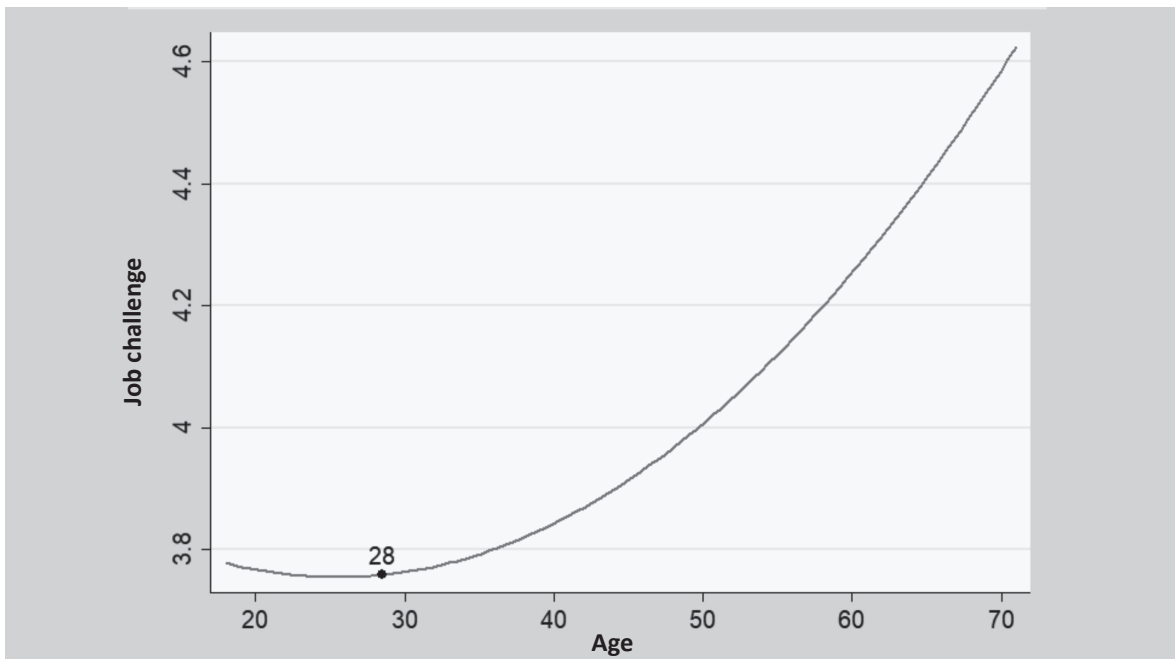
Parenthesized

t\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Based on our key findings, we conducted a comprehensive graphical analysis of the relevant variables in relation to age. The objective is to gain a deeper understanding of how these factors evolve over time. It starts by focusing on the variable related to workplace inspiration (Figure 2). The results indicated a clear upward trend, suggesting a positive correlation with age. Over the observed years, inspiration levels significantly increased within our study group.

This result aligns with previous research by Thrash and Elliot (2004), who emphasize the importance of understanding tasks in inspiring motivation. Additionally, our observations suggest that with experience and time, individuals become more dedicated to their tasks, motivated by their functional aspects and potentially also by the company's values, design, participation, and leadership style.

The data reveals a significant relationship between age and the perception of one's job as challenging. Figure 3 illustrates the trend of this variable across the age groups studied. The graph demonstrates that this perception increases with age, becoming more pronounced from the age of 28 onwards and continuing to rise. This pattern suggests that while early career stages may present greater obstacles, as individuals overcome these challenges and gain experience, they develop confidence in their abilities. Drawing from Gutiérrez Zarza's (2015) findings, we can infer that this trend may be attributable to increased autonomy in task execution and supportive supervision, which enables employees to effectively utilize their skills.

**Figure 2***Relationship between age and work inspiration***Figure 3***Relationship between age and job challenge*

This study also delves into the concept of workplace happiness as it relates to the state of

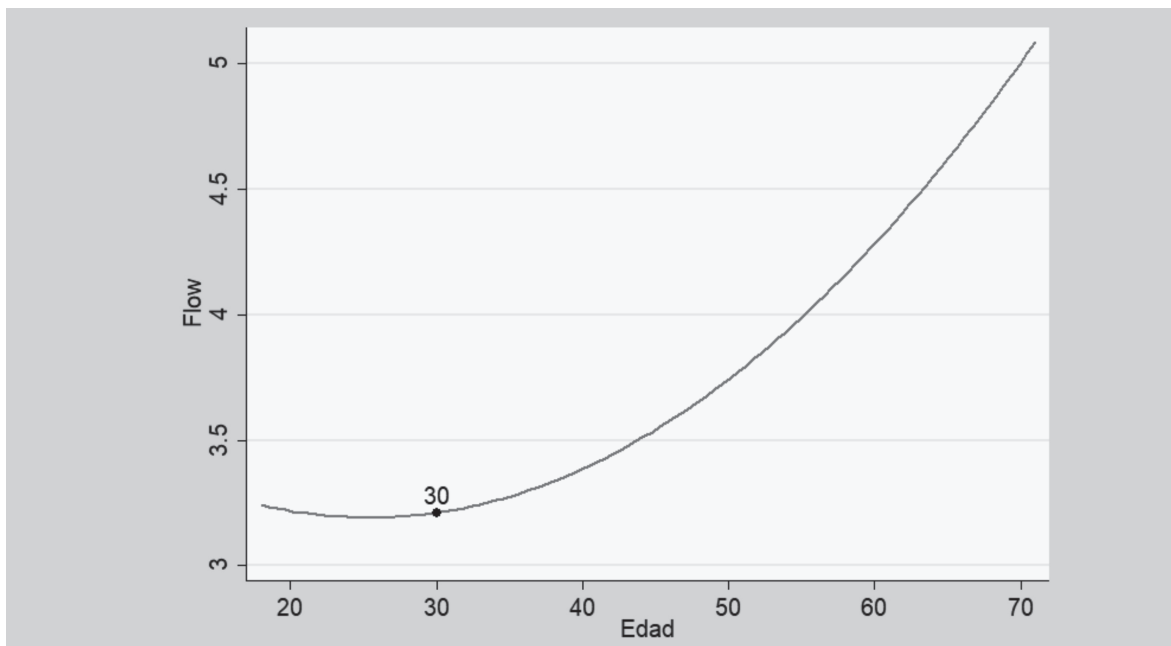
flow or absorption experienced by employees. Investigating how this sentiment varies across

different age cohorts offers insights into prevalent trends. Llorens *et al.* (2010) found a robust link between work-related absorption and positive psychological capital, encompassing job satisfaction and engagement. The key to this relationship lies in the reduced stress levels associated with absorption, enabling employees to maintain vitality in their roles.

Figure 4 illustrates the progression of workplace absorption across age brackets. The trend appears to be relatively linear among individuals aged 18 to 30, after which it demonstrates a marked increase. This pattern may be attributable to the heightened pressures faced by younger employees who are new to the workforce, as they strive to meet performance expectations and secure career advancement opportunities.

After performing the main regression analysis, the Variance Inflation Factor (VIF) test was performed to evaluate the multicollinearity among the independent variables. The VIF test is a widely used technique to identify problematic intercorrelations in regression models (Belsley, 1991; Montgomery *et al.*, 2012). As shown in Table 5, all VIF values were less than 10, indicating the absence of severe multicollinearity. These low VIF values suggest that the variance of regression coefficients is not substantially high due to the intercorrelations between the predictors. This finding reinforces the reliability of the regression model and confirms the independence of the included variables, aligning with the guidelines provided in the literature.

**Figure 4**  
*Relationship between age and state of flow at work*



**Table 5**  
*Regressions of the variables of commitment and job satisfaction*

| Variable                    | VIF  | 1/VIF    |
|-----------------------------|------|----------|
| Strong and vigorous at work | 1.67 | 0.598024 |
| Works for long periods      | 1.81 | 0.552179 |
| Works when things go wrong  | 1.7  | 0.588646 |
| Work is significant         | 2.36 | 0.424108 |

| Variable                              | VIF                | 1/VIF    |
|---------------------------------------|--------------------|----------|
| Work inspires the worker              | 2.56               | 0.390293 |
| The worker is proud of his/her work   | 2.27               | 0.440053 |
| Work is challenging                   | 1.99               | 0.502875 |
| Time flies while working              | 1.47               | 0.680059 |
| Forgets everything while working      | 1.3                | 0.770285 |
| Happy when is absorbed at work (flow) | 1.54               | 0.647682 |
| Sex                                   | 1.34               | 0.743849 |
| Age                                   | 1.32               | 0.194875 |
| Age2                                  | 7.96               | 0.208531 |
| Service time                          | 1.69               | 0.591736 |
| Marital status                        | 1.5                | 0.667344 |
| Has children                          | 1.35               | 0.743342 |
| Years of education                    | 1.38               | 0.723781 |
| Type of contract                      | 6,075              | 0.164737 |
| <b>Mean VIF</b>                       | <b>2.293611111</b> |          |

## Conclusions

The aim of this study was to investigate the relationship between the components of engagement and job satisfaction among employees of commercial companies in Peru. Previous research has demonstrated that engagement influences job satisfaction, and when analyzing each variable of it, the significant results are dedication and absorption, specifically inspiration, challenge, and flow at work.

The nature of job satisfaction involves some degree of endogeneity, potentially generating bias effects due to reverse causality and omitted variables. In this research, we have incorporated measures to mitigate concerns related to this issue, such as the addition of control variables and the decomposition of the engagement variables according to Schaufeli *et al.* (2002).

Furthermore, some studies have corroborated our findings, specifically Straume and Vittersø (2012), who have provided evidence suggesting that the connection between work and inspiration is more robust than the challenges encountered in the workplace. They argue that when an employee is inspired, it not only leads to job satisfaction but also equips them to overcome the difficulties that may arise while addressing

work-related issues. This suggests that companies should foster inspiration in their employees to enhance both their satisfaction and their ability to tackle challenges.

This is particularly important for employees in commercial companies who strive to meet their sales targets. Our research results affirm that inspiration is the most significant aspect related to job satisfaction.

Another significant aspect of engagement is the challenge; according to Zarza (2013), this variable at a moderate level contributes to job satisfaction when there is freedom in the task and feedback from superiors. This is crucial because employees can utilize and demonstrate their skills.

Moreover, Llorens (2009) demonstrates a strong relationship between absorption in work and positive psychological capital, which includes job satisfaction and commitment. This absorption, manifested as flow, provides low levels of stress, allowing employees to remain energized at work.

These findings highlight the importance of the manager's role in driving commitment and job satisfaction. According to Robbins and Finley (2004), leaders must inspire and motivate their collaborators to achieve inspiration and engagement. Swid (2016) further adds that leadership



style directly affects job satisfaction through effective participation and communication.

Based on the results obtained in this research, the profile of a transformative leader emerges as a key driver of engagement by fostering open, transparent, and motivational communication among collaborators, exerting an inspiring effect.

Similarly, the transformative leader invests time in understanding employees at both personal and professional levels, addressing not only organizational goals but also the individual aspirations and challenges of each team member. This approach not only promotes alignment with organizational objectives but also establishes a personal connection with individual goals and aspirations (Reynoso and Arbaiza, 2023).

These leadership traits significantly contribute to workplace immersion, establishing conducive conditions for the state of flow and, ultimately, yielding a positive impact on job satisfaction. Therefore, companies should promote this leadership style to improve the work environment and employee engagement.

The study revealed diversity in age ranges and variability in job satisfaction across different stages of professional development. A decrease in job satisfaction is observed between the ages of 18 and 38. Highlighting the importance of companies being aware of this reality, Sandhya and Sulphrey (2019) suggest that organizations focus on understanding the various stages of the employee lifecycle to foster stronger relational contracts. Additionally, they propose the implementation of Buddy Programs, as in the long term, this contributes significantly to engagement.

This, along with a transformational leadership style that promotes inspiring and challenging work, can mitigate the effect of reduced job satisfaction (Donkor *et al.*, 2022).

Furthermore, companies must design a value proposition for young people based on learning and development opportunities, flexible schedules, promotion of social integration at work, and a variable remuneration system that stimulates better performance.

Based on the findings derived from this research, it is recommended that further investiga-

tions into engagement and job satisfaction across different age groups be conducted, particularly within various sectors of the economy. Special attention should be given to understanding the factors influencing commitment in the commercial sector, considering that our study identified challenge, inspiration, absorption, and happiness when absorbed at work as the primary significant variables. Another point of study will be to explore the impact of age on job satisfaction in diverse sectors is crucial, given our findings indicating a quadratic and concave relationship.

In addition, it is essential to acknowledge the potential impact of life events such as parenthood on job satisfaction, as the results showed a high negative significance. Research in this area indicates that the responsibilities associated with parenthood, such as childcare duties and balancing work and family life, can create additional stressors that may diminish overall job satisfaction (Walsh and Murphy, 2021). This aligns with the broader understanding of work-life balance and its significance in employee well-being.

Moreover, the presence of children can influence various aspects of an individual's professional life, including career advancement opportunities, flexibility in work arrangements, and overall job engagement. These factors may contribute to differences in job satisfaction levels among employees with and without children (Estes, 2005; Glass *et al.*, 2016; Windsor and Crawford, 2019; Walsh and Murphy, 2021). Therefore, while our study primarily focuses on the components of engagement and their relationship with job satisfaction, it's crucial for future research to explore how factors like parenthood intersect with these dynamics.

While acknowledging these valuable insights, it is important to note the model's limitations. We are aware of certain deficiencies, such as the absence of data on specific demographic variables that could further refine our analysis. Furthermore, expanding the scope of information to encompass a broader range of sectors and different time periods, including a time series analysis, would provide a more comprehensive perspective. This extension could offer valuable insights into the dynamics of engagement and job

satisfaction, allowing for a more informed and strategic approach to policy formulation.

On the other hand, these types of data lend themselves to the application of more robust statistical models. Utilizing other statistical strategies would enhance our ability to discern causal effects.

In conclusion, this study delved into the relationship between engagement and job satisfaction among employees of commercial companies in Peru. Through a methodological approach that allowed for the inclusion of control variables and the detailed study of the components of engagement, empirical evidence has been provided to support the importance of inspiration, challenge, absorption, and happiness at work in driving job satisfaction.

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