

PSYCHOLOGICAL CONTRACT AND ENGAGEMENT – A STUDY OF THE HIGHER EDUCATION TEACHERS IN PORTUGAL¹

NATÁLIA COSTA ⁽¹⁾⁽²⁾, CARLOS MIGUEL OLIVEIRA ⁽¹⁾⁽³⁾

⁽¹⁾ | ISLA - POLYTECHNIC INSTITUTE OF MANAGEMENT AND TECHNOLOGY, VILA NOVA DE GAIA, PORTUGAL

⁽²⁾ | REMIT - RESEARCH ON ECONOMICS, MANAGEMENT AND INFORMATION TECHNOLOGIES

⁽³⁾ | CEOS.PP - CENTRE FOR ORGANISATIONAL AND SOCIAL STUDIES, PORTO, PORTUGAL

CORRESPONDING AUTHOR: NATÁLIA COSTA (NATALIA.COSTA@ISLAGAIA.PT)

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ABSTRACT:

Economic, social, political, and technological changes are switching how organisations manage their employees. The classic management models are insufficient to answer the new organisation's realities, and the need to explore constructs related to the relationship between employees and employers arises.

This study links the higher education teacher's engagement and psychological contract in Portugal. The methodology used was a structural equation model with partial least squares estimation (PLS-SEM). A total of 1.143 participants proved that there is a positive and significant relationship between engagement and limitations, stability, performance support, development, and psychological contract fulfilment dimensions.

KEYWORDS: ENGAGEMENT, HIGHER EDUCATION TEACHERS, PSYCHOLOGICAL CONTRACT, PLS-SEM

1 INTRODUCTION:

Globalisation, digitalisation, high competitiveness, and the focus on profits, among others, have brought the need to reorganise employer-employee relations (Costa & Oliveira, 2020). In this sense, some constructs appear to make this relationship better. In this paper, the author will explore the psychological contract (PC) and the engagement of higher education teachers in Portugal.

Based on the assumption that each employee has two types of contracts with the organisations where they work, we intend to find out if the dimensions of the PC are related to the levels of engagement among the target group. With this, the main objective is to validate if there is a positive and significant relationship between the dimensions of the PC and engagement.

The PC is an alternative to the formal contract that evaluates the relation with the job. This contract previews reciprocal exchange between employers and employees, and it is a subjective, individual, dynamic contract that previous all the things that aren't included in the formal contract.

Engagement is a positive mental status associated with the employee's commitment to the organisation/job.

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Both constructs under analysis have several benefits for employees and employers. These benefits are essential to the satisfaction/well-being of the employees and are determinants of the performance that impacts the organisations' efficacy, efficiency, and success.

The target audience was a strategic choice for the development of this study, considering that these professionals have multiple complaints regarding the freezing of salaries, career progression, and also the conditions provided.

The article is structured as follows: a literature review (about PC, engagement, and higher education teaching career), methodology, analysis and discussion of research results, conclusion, suggestions, and limitations of the study.

2 LITERATURE REVIEW

In this topic, the authors will explore the three thematic under analysis. The objective is to present a summarized literature review about the PC, engagement, and characteristics of the higher education teacher, in Portugal.

2.1 Psychological Contract

For a long time, the PC wasn't studied because it is still an unknown theme (Costa, 2021; Costa and Oliveira, 2022), but with the economic, social, political, and technological changes became necessary to study the relations between employees and organisations. These external factors promote internal changes in organisations (Costa and Oliveira, 2022). The employees became to be understood as essential human resources with an active role in the organisations relevant to determine the organisations' efficacy, efficiency, and success (Costa, 2021; Costa & Oliveira, 2022; Dwiyantri et al., 2019).

There isn't a consensual definition of the PC. Argyris (1960) is mentioned as the first author to present this concept (Naidoo et al., 2019), and the author defines PC as "an implicit agreement between the involved parts describing the working relationship that is based on the beliefs, perceptions, expectations and obligations between them" (Costa, 2021, p. 14).

In Portugal, the formal contract was legislated by the rules in the Labour Code (Costa & Oliveira, 2022; Gordo, 2016). The PC it's an "alternative to the formal contract and fills the gaps not predicted in the formal contract" (Costa and Oliveira, 2022, p. 952). This PC is an informal contract between the involved parts, psychological, dynamic, implicit (not written), subjective, individual and it's composed of mutual obligations in a perspective of reciprocal exchange (Costa and Oliveira, 2022; Dwiyantri et al., 2019; Nishadi and Weerakkody, 2019; Raeder, 2018; Soares and Mosquera, 2019). In this mutual obligations include "perceptions, expectations, and obligations of those involved" (Costa and Oliveira, 2022, p. 953). Some researchers think that the PC "is formulated before the employee integration process and arises when one of the parties understands that the contribution made should be reciprocally rewarded" (Costa and Oliveira, 2022, p. 954).

PC can affect important parameters like performance, well-being, organisational success, employees retention, turnover, insecurity, the behaviors between the involved parts, organisational commitment, innovation, and creativity (Costa, 2021; Dwiyantri et al., 2019; Maia and Bastos, 2019).

Psychologic Contract Inventory (PCI) is the most used scale to measure PC. In this study, the authors used this scale from Rousseau (2008). The scale is divided into parts, dimensions, and subdimensions. The parts present the scale for measuring the employee's obligations, the employer's obligations, the PC transition, and the PC fulfillment. The authors only use the part to measure the employee's obligations and the PC's fulfillment. The PC fulfillment it's composed of two items. The employee's obligations have a transactional, relational, and balanced contract as dimensions. The transactional has short-term and limitations, as subdimensions. The relational has the loyalty and stability subdimensions. The balance it's composed of performance support, development, and employability. Each subdimension has four items, so was used a total of 30 items (Costa, 2021; Costa and Oliveira, 2022).

Transactional contract it's related to the economic exchange between the involved parts, for a stipulated time (short-term) and obligations associated with the responsibilities of the job and where the employer can give some necessary tools to the progress of the employee (Costa, 2021; Costa and Oliveira, 2022; Tufan and Wendt, 2020; Wu and Nurlaela, 2020; Zhen et al., 2019).

The relational contract represents the stable relationship between the involved parts, which represents the obligation of each employee to contribute to the organisation's success (loyalty) and have a good performance to continue to stay in the work (stability). This is a dynamic contract that goes far more than the rewards (Costa, 2021; Costa and Oliveira, 2022; Tufan and Wendt, 2020; Zhen et al., 2019).

The balanced contract combines transactional and relational contract characteristics, and “is an open, flexible, and dynamic contract, without a defined duration, but in which the rewards are clearly explained” (Costa and Oliveira, 2022, p. 954). In this contract, both parts need to contribute to mutual learning and development (Costa, 2021). Here, it's expected the organisations to create development opportunities and new employment opportunities inside and outside the organisation.

Job security and job promotion between others are related to these mutual obligations (Costa, 2021; Ruokolainen et al., 2018). These obligations can change by some factors, like individual values, the social context, and the experiences lived in the workplace (Costa, 2021).

2.2 Engagement

In a period of changes, organisations have a big challenge on their hands. New theories of new perspectives of management appear. These theories are focused on the care with internal customers (employees), like happiness management, and the promotion of better conditions to stimulate engagement, among others. This appears in opposition to the classical forms of management (Bouranta et al., 2019; Costa et al., 2022; Mazzarolo et al., 2021).

Engagement's a very explored construct in literature (Costa and Oliveira, 2020), because “The diverse conditioning factors of the external environment have made it necessary to restructure the relations between employee and employer” (Costa and Oliveira, 2022, p. 952). There isn't a consensual definition, but it's considered a positive mental status about the work, related to the level of commitment to the work activity or the organisation (Costa, 2021; Costa and Oliveira, 2020; Nalini and Mohd, 2019; Soares and Mosquera, 2019; Sun and Bunchapattanasakda, 2019). Some authors say that Khan (1990) was the first investigator to try to define the concept of engagement (Costa, 2021; Gordo, 2016; Kasekende, 2017; Machado et al., 2012). Kan (1990) has the premise that each one used in distinct ways the cognitive skills (skills related to attention, concentration, and commitment), physical skills (related to physical resistance), and emotional skills (related to motivation and acceptance of superiors), in the performance of their duties. So engaged employees are physically, emotionally, and cognitively committed to their work/organisations (Costa, 2021). Other authors define engagement as the positive side of burnout (Maslach et al., 2001; Schaufeli and Bakker, 2004).

Engagement brings benefits at both the individual and organisational levels (Lv and Xu, 2018; Saboor et al., 2018). This is because engaged workers have, generally speaking, better levels of performance, well-being, and life satisfaction (Costa, 2021), but also contribute to the organisation's competitive advantage, helps decrease turnover and absenteeism, deliver better financial results, promote innovation and corporate image, improves profit, and better interpersonal relations (Costa, 2021; Naidoo et al., 2019; Nishadi and Weerakkody, 2019; Soares and Mosquera, 2019).

Utrecht Work Engagement Scale (UWES) is the most common scale used for this Effect. In this study, the authors choose to use the reduced version UWES-9, from Schaufeli & Bakker, 2004 and translated into Portuguese by Simões & Gomes (2012). The scale measures vigor, dedication, and absorption.

People with high levels in the vigor dimension have high levels of energy, mental resilience, voluntary effort in the execution of tasks, and persistence in the face of obstacles that arise (Costa, 2021; Naidoo et al., 2019; Saboor et al., 2018; Schaufeli and Bakker, 2004). Dedication is the dimension that refers to each employee's commitment to their work. Enthusiasm, inspiration, pride, and a sense of meaning in the work done are common (Costa, 2021; Naidoo et al., 2019; Saboor et al., 2018). Absorption is associated with the employee's ability to feel focused, and happy, lose track of time, and have difficulty disconnecting from his or her job (Costa, 2021; Naidoo et al., 2019; Saboor et al., 2018).

Some authors argue that the PC comes before engagement in employees (Soares and Mosquera, 2019), while others that it is through the PC that engagement can be promoted (Lv and Xu, 2018).

2.3 Higher education teaching career

Portuguese Higher Education Institutions (HEIs) are under the jurisdiction of the Ministry of Science, Technology, and Higher Education. The military and police public higher education institutions, in addition to the Ministry of Science, Technology, and Higher Education, are also under the jurisdiction of the Ministry of National Defense and the Ministry of Internal Affairs (Comissão Europeia, 2018).

HEIs are divided into university and polytechnic education. These institutions are assessed by the Agency for Assessment and Accreditation of Higher Education (A3ES). It is responsible for "the assessment and accreditation of higher education institutions and their study cycles as part of the higher education quality assurance system" (Comissão Europeia, 2019a). Higher education, as stipulated by the Basic Law of the Education System, has three cycles of studies that correspond to the following degrees: Degree (1st cycle of studies), Master (2nd cycle), and PhD (3rd cycle).

Public and private HEIs have distinctive processes of action. Public HEIs are conditioned by the University Teaching Career Statute and by the Polytechnic Higher Education Teaching Staff Career Statute (Comissão Europeia, 2019b). In private HEIs, private law applies to recruitment, which does not prevent teaching staff from having the qualifications and academic degrees required to assume the functions of a particular category.

3 METHODOLOGY AND HYPOTHESIS

The study follows quantitative research. SmartPLS was the software used. Table 1, summarized the methodology used.

Table 1. Methodological synthesis

Unit analysis	Individual (Higher Education Teacher)
Target group	Higher Education Teachers (University and Polytechnic) from public and private institutions, and Military and Police Public
Information sources	Survey
Geographical scope	National – Portugal
Sample	1.185 validated surveys
Dates	From March to May 2020
Scales used	PC measured by Rousseau's (2008) survey Engagement was measured by Schaufeli & Bakker (2004) survey, translated by Simões & Gomes (2012)
Techniques used	Structural equation analysis with partial least squares estimation
Software used	SmartPLS (version 3.3.3)

The survey was divided into three different parts. The first is to validate the personal and professional information, the second one to measure the PC, and the last is to validate the engagement. The professional questions are based on Portuguese law and the data available by the General Direction of Higher Education (DGES).

The authors formulated the following hypothesis presented in Table 2. The objective is to validate if exists a relationship between the engagement and the dimension of the PC.

Table 2. Hypothesis under analysis

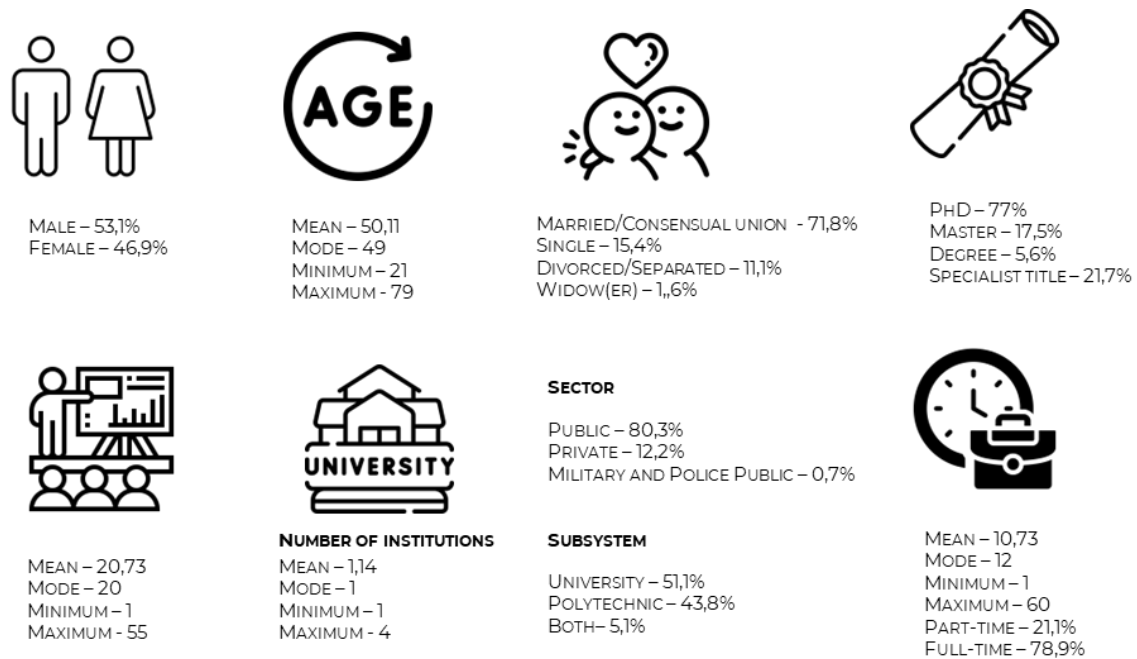
Hypothesis identificatio n	Formulation of the Hypothesis
Hypothesis 1 _{a)}	There is a positive and significant relationship between engagement levels and the short-term dimension
Hypothesis 1 _{b)}	There is a positive and significant relationship between engagement levels and the limitations dimension
Hypothesis 1 _{c)}	There is a positive and significant relationship between engagement levels and the loyalty dimension
Hypothesis 1 _{d)}	There is a positive and significant relationship between engagement levels and the stability dimension

Hypothesis identification	Formulation of the Hypothesis
Hypothesis 1 _α	There is a positive and significant relationship between engagement levels and the Performance support
Hypothesis 1 _η	There is a positive and significant relationship between engagement levels and the development dimension
Hypothesis 1 _ρ	There is a positive and significant relationship between engagement levels and the Fulfillment of the PC

3.1 Sample characterization

This research studies higher education teachers in Portugal and validated 1.143 participations. Most of the participant are men (53,1%), with ages between 21 and 79 (50 years old are mean), married or in a consensual union (71,8%), with PhD (77%), the majority doesn't have a specialist title, on average have been teaching for more than 20 years, works in more than one institution, essentially in public institutions (80,3%), in the polytechnic subsystem, works approximately eleven hours, in a full-time job (78,9%).

Figure 1 . Sample characterization



4 ANALYSIS AND DISCUSSION OF RESEARCH RESULTS

This topic will present all the steps and data followed until the validity of the hypotheses is presented.

4.1 Validity and reliability of measurement

Structural equation modeling with partial least squares estimation (PLS-SEM) was used to validate the hypotheses under study. This method was developed by Wold (1982, cited by Hair et al., 2017). This methodology is robust to the lack of multivariate normality, so it's a reliable method for small sample sizes (Bido and Da Silva, 2019).

The authors choose a structural model with first-order latent variables (LV). Table 3 shows the variables that were excluded from the analysis because the loadings are lower than 0,7.

Table 3. Excluded variables

Dimension	Indicator	Mean	Standard deviation	Loadings
employability - balanced contract	EMP_4	2,475	1,349	0,654
stability - relational contract	EST_4	3,676	1,366	0,595
loyalty - relational contract	LEAL_1	3,561	1,251	0,596
Engagement	AB_3	5,858	1,132	0,644

After this process, all the variables present loadings higher than 0,7. The average variance extracted (AVE) is greater than 0,5 in all LV.

Table 4. Mean, standard deviation, and loadings

Construct LV	Indicators	Mean	Standard deviation	Loading	Bootstrap t-test	P-value
Fulfillment of the PC	CCP_1	4,871	0,343	0,875	50,319	0,000
	CCP_2	4,839	0,396	0,910	59,839	0,000
Short-term - TC	CP_1	4,19	1,217	0,809	26,575	0,000
	CP_2	4,153	1,235	0,804	27,499	0,000
	CP_3	4,192	1,216	0,890	55,006	0,000
	CP_4	3,769	1,390	0,842	35,112	0,000
Development - BC	DESENV_1	4,286	0,904	0,853	66,338	0,000
	DESENV_2	4,22	0,980	0,877	86,374	0,000
	DESENV_3	4,172	0,966	0,876	82,471	0,000
	DESENV_4	3,937	1,030	0,824	61,259	0,000
Employability - BC	EMP_1	3,822	1,168	0,894	19,371	0,000
	EMP_2	3,301	1,347	0,778	11,778	0,000
	EMP_3	2,596	1,353	0,700	6,861	0,000
Engagement	AB_1	5,651	1,142	0,762	50,233	0,000
	AB_2	6,23	0,893	0,812	67,049	0,000
	DE_1	5,621	1,059	0,884	125,764	0,000
	DE_2	5,672	1,096	0,863	95,508	0,000
	DE_3	6,308	0,853	0,745	46,271	0,000
	VI_1	5,472	1,013	0,866	106,293	0,000
	VI_2	5,464	1,030	0,867	103,623	0,000
VI_3	5,452	1,177	0,823	69,066	0,000	
Stability - RC	EST_1	3,183	1,343	0,728	29,323	0,000
	EST_2	3,913	1,125	0,921	108,346	0,000
	EST_3	4,149	1,009	0,921	119,824	0,000
Loyalty - RC	LEAL_2	4,254	0,965	0,839	54,535	0,000
	LEAL_3	4,554	0,837	0,830	46,249	0,000
	LEAL_4	4,368	0,953	0,895	75,814	0,000
Limitations - TC	LIM_1	4,122	1,133	0,810	36,056	0,000
	LIM_2	4,348	1,039	0,911	105,485	0,000
	LIM_3	3,898	1,165	0,740	27,891	0,000
	LIM_4	4,307	1,035	0,862	55,654	0,000
Performance support - BC	SD_1	4,083	0,974	0,855	65,152	0,000
	SD_2	4,29	0,862	0,912	92,265	0,000
	SD_3	4,287	0,849	0,923	132,591	0,000
	SD_4	4,222	0,885	0,917	126,680	0,000

The authors excluded all the variables from employability because the Cronbach alfa values are lower than 0,7 (reference value).

Now, all Cronbach Alfas are higher than 0,7, which's the acceptable internal consistency (Hair et al., 2011), and the lower value register is 0,746 (table 5). The compose reliability presents higher values than the necessary to consider, that is 0,7 (Marôco, 2010), and the lowest find was 0,887 (table 5).

The reliability was confirmed, all variables presented an AVE higher than 0,6 and the reference value is superior to 0,5 (Bido and Da Silva, 2019). These values represent a convergent validity and the unidimensionality of the constructs. All indicators are significant at 1%, see the values from bootstrap test-t that confirmed the convergent validity.

Table 5. Correlation matrix between first-order LV, validity, and reliability of constructs

LV	1	2	3	4	5	6	7	8
1. Fulfillment of the PC	0,892							
2. Short-term / TC	0,096	0,837						
3. Development / BC	0,209	0,160	0,858					
4. Engagement	0,279	0,138	0,451	0,834				
5. Stability / RC	0,138	0,310	0,298	0,319	0,865			
6. Loyalty / RC	0,170	0,170	0,459	0,305	0,335	0,868		
7. Limitations / TC	0,125	0,281	0,239	0,218	0,211	0,360	0,833	
8. Performance support / BC	0,219	0,142	0,611	0,374	0,317	0,461	0,291	0,902
Cronbach Alfa	0,746	0,859	0,880	0,936	0,831	0,836	0,851	0,924
Composed reliability	0,887	0,903	0,917	0,948	0,898	0,901	0,900	0,946
AVE	0,796	0,700	0,735	0,695	0,748	0,753	0,694	0,814

The model doesn't present multicollinearity problems, and all the variance inflation factor (VIF) are lower than 5 (Hair Jr. et al., 2016).

The AVE was analyzed for every LV, as well as comparing their correlations to analyze discriminant validity. The square AVE it's superior to the correlations between the LV. So, this means that they share more variance between their measurement than with other constructs.

4.2 Structural model results

In terms of structural relations, the constructs don't always present values higher than 1,96 at the t-value level, and only the dimension of loyalty and short-term registered p-values higher than 0,05, that is, the relationship is positive, but not significant. In this sense, there is no valid relationship between the loyalty dimension and engagement levels, as well as between the short-term dimension and engagement levels. The relationships between the dimensions of development, performance support, stability, limitations, and fulfillment of the PC with the levels of engagement are valid and significant at 5%, showing t-value values greater than 0,322. The f² "assesses the magnitude or strength of the relationship between the latent variables" (Wong, 2019, p. 38). Values highlighted in red in Table 6 mean that the effect size is small (taking 0,02 as the reference value).

Table 6. Structural Relationships of the Constructs

Structural relationships	Hypothesis	VIF	F ²	Structural coefficient	Standard error	t-value	p-value	Adjusted R ²
BC - Development -> Engagement	H3 _{fj} (+)	1,730	0,069	0,293	0,033	8,782	0,000	
BC - Performance support -> Engagement	H3 _{ei} (+)	1,773	0,004	0,075	0,037	2,013	0,044	
RC - Loyalty -> Engagement	H3 _{ci} (+)	1,497	0,001	0,032	0,035	0,924	0,356	
RC - Stability -> Engagement	H3 _{di} (+)	1,267	0,029	0,164	0,033	4,897	0,000	0,276
TC - Short-term -> Engagement	H3 _{ai} (+)	1,173	0,000	-0,009	0,028	0,322	0,747	
TC - Limitation -> Engagement	H3 _{bi} (+)	1,244	0,004	0,061	0,030	2,043	0,041	
Fulfillment of the PC-> Engagement	H3 _{gi} (+)	1,070	0,036	0,166	0,029	5,752	0,000	

The authors based on Figure 1 and Table 6 validate the hypotheses H3_b), H3_d), H3_e), H3_f) e H3_g).

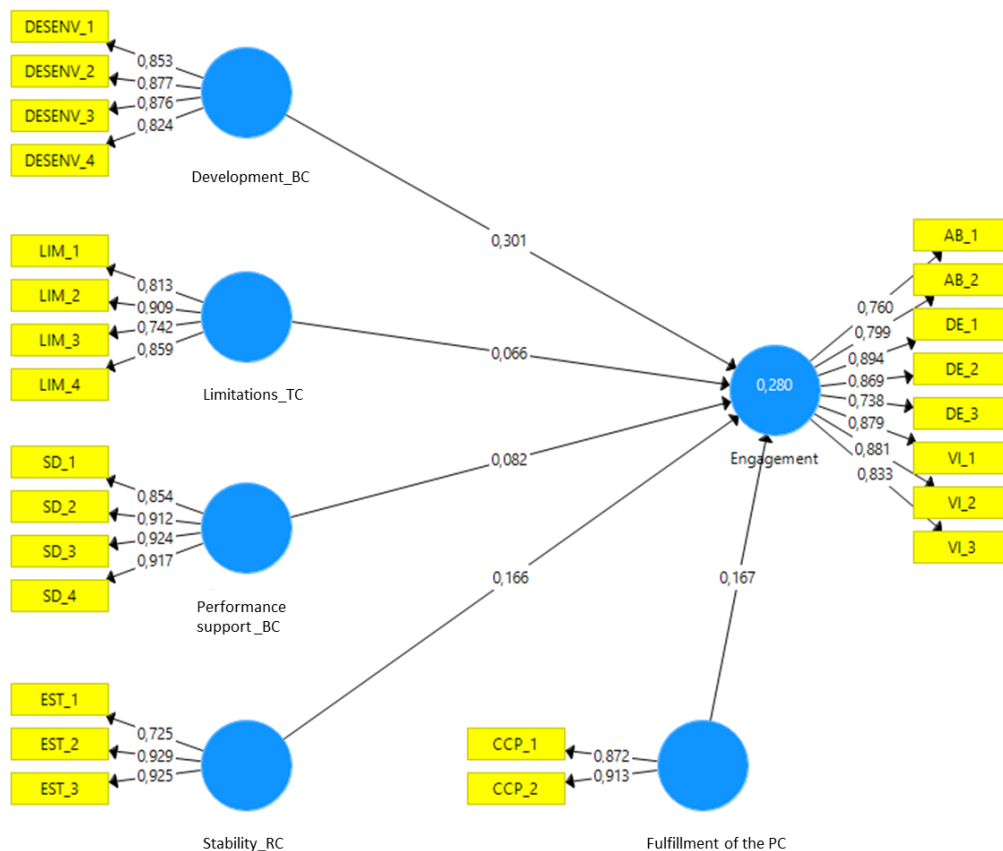
The short-term and loyalty dimensions present a positive but not significant relationship.

The dimensions analyzed by the study explain 27,6% of the variance in the levels of engagement of higher education teachers in Portugal.

The authors calculated Stone-Geisser's Q² value to validate the predictive relevance of the model, which is one of the cross-validation criteria of the predictive relevance of the PLS path model. according to Hair et al. (2011), Q² values must be greater than zero for the model to be considered to have predictive relevance. The study presents a Q² of 0,191 for levels of engagement.

figure 2 presents the final structural model.

Figure 2. Final Structural Model



5 CONCLUSIONS, SUGGESTIONS, LIMITATIONS OF THE STUDY

The objective of the study is to analyze if there is any relationship between the PC and the engagement of higher education teachers.

The dimensions of the PC analyzed in the study represent 27,6% of the levels of engagement among the target group. There is a positive and significant relationship between engagement and limitations, stability, performance support, development, and PC fulfillment dimensions. The authors validate a positive but not significant relationship between engagement and loyalty, and short-term.

For future research, more representative samples should be obtained and longitudinal studies should be developed. It would be interesting to study the employer's obligations and make a comparison between both perspectives (employee and employer). It would also be interesting to study the transitional contract to try to understand how this target group or others in similar situations are projecting their future, that is if they are thinking of leaving their professions or if despite adversities they will continue to fight for their jobs.

One of the main limitations was that we couldn't validate the relationship between contract types and engagement, making it impossible to validate which contract type contributes the most to explaining engagement in higher education teachers.

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