

## Fostering engaged employees: the role of leadership and self-efficacy

Jacoba Tripiñana y Susana Llorens\*

Equipo WONT. Universitat Jaume I

**Título:** Fomentando empleados *engaged*: el rol del líder y de la autoeficacia.

**Resumen:** En el presente estudio se analiza el papel del liderazgo de apoyo y de la autoeficacia en el desarrollo del *engagement* en el trabajo. Concretamente, se evalúa el papel mediador que desempeña la autoeficacia entre el liderazgo y el *engagement* en el trabajo. La muestra está compuesta por 271 empleados que pertenecen a una Administración Pública (Ayuntamiento). Análisis de Ecuaciones Estructurales revelan que la autoeficacia media la relación entre liderazgo y *engagement* en el trabajo. La percepción de tener un liderazgo de apoyo se relaciona de manera significativa con la autoeficacia de los empleados, que a su vez, se relaciona positivamente con el *engagement* en el trabajo.

**Palabras clave:** Liderazgo; autoeficacia; *engagement*; administración pública.

**Title:** Fostering engaged employees: the role of leadership and self-efficacy.

**Abstract:** This study examines the role of supporting leadership and self-efficacy in the development of work engagement. We evaluate the mediating role of self-efficacy between leadership and work engagement in a sample of 271 employees from a Public Administration (City Hall). Results from the Structural Equation Modeling Analysis reveal that self-efficacy mediates the relationship between leadership and work engagement. The perception of having supporting leaders relates significantly with employees' self-efficacy, which in turns, positively relates to work engagement.

**Key words:** Leadership; self-efficacy; engagement; public administration.

### Introduction

The present crisis of values, in both economic and social terms, is a reality today. Now, more than ever, companies need employees who are engaged and happy at work. It seems that investing in health is synonymous with profitability and competitiveness. In fact, those companies with engaged employees (those who are passionate about their work) will find it easier to find their way out of the crisis (Salanova, Llorens, Cifre, & Martínez, 2012). In this context, engagement may be an essential element in achieving business success. It is defined as a positive affective, work-related motivational and psychological state characterized by vigor, dedication, and absorption (Schaufeli & Salanova, 2009). Although much is known about its concept and measurement, it is essential to know what its antecedents are, antecedents that in this case have to do with the work environment and personal resources. This relationship becomes more interesting if it is focused on a special context, namely, the public administration. Hence, this study analyzes both the work resources (leadership) and the personal resources (professional efficacy) of work engagement within the context of the public administration, taking the RED Model (Resources-Experiences-Demands) (Salanova, Cifre, Llorens, Martínez, & Lorente, 2011; Salanova, Cifre, Martínez, & Llorens, 2007) as its basis.

#### Theoretical Model: the RED Model

The RED model (Salanova, Cifre et al., 2007 and 2011) is a descriptive model of psychosocial health that considers efficacy beliefs as being essential for the development of psychosocial health. This model is an extension of the Demands-Control Model (Karasek, 1979; Karasek & Theorell, 1990) and the Demands-Resources Model (Demerouti, Bak-

ker, Nachreiner, & Schaufeli, 2001), although it focuses on the study of psychosocial health from a more holistic approach, since it encompasses the evaluation of psychosocial distress (e.g., burnout, technostress, workaholism) combined with the study of positive health factors (e.g., engagement, satisfaction, flow, positive emotions) and organizational consequences (e.g., performance, quality of work and output, absenteeism, organizational commitment, social engagement) within one single model. In this sense, the model considers four blocks of variables, namely: personal resources, work demands/resources, emotions/experiences, and work behaviors. While personal resources are led by self-efficacy and act as the prism through which the rest of the social work environment is perceived, demands and job resources are in turn divided into job-related demands/resources (e.g., quantitative overload as demand and control as a resource), socially (e.g., emotional overload as demand, and social support as resources), at the organizational level (e.g., job insecurity as demand, and career opportunities as a resource), and at the extra-work level (e.g., work-family balance). According to the RED Model and the Demands-Resources Model, personal resources are defined as the resources of the people who make up the work team that either alone or in interaction with work resources and extra-organizational resources are functional when it comes to addressing work demands or extra-organizational demands (Salanova, Llorens et al., 2012), and also have a value in themselves as sources of motivation, learning, and development both individually and collectively (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). Second, work resources are the physical, psychological, social, and/or organizational aspects of the job that are functional in achieving work goals, reducing work demands, and stimulating growth and personal development. And finally, work demands are conceptualized as "those physical, psychological, social, and/or organizational aspects that require the worker to make a physical and/or psychological effort, and are associated with physical and/or psychological costs" (Salanova, 2009 p. 101). The RED Model draws a distinction between "threatening demands"

**\* Dirección para correspondencia [Correspondence address]:**

Susana Llorens, Área de Psicología Social, Universitat Jaume I, Av. Sos Baynat, s/n. 12071. Castellón (Spain). E-mail: [llogum@uji.es](mailto:llogum@uji.es)

and "challenging demands". Threatening demands (e.g., role conflict) are defined as those negative demands which have the potential to damage personal benefit or accomplishment, thereby giving rise to negative emotions and a passive style of coping. Conversely, challenging demands (e.g., quantitative overload) are conceptualized as those demands that are positively valued due to their having the potential to promote benefits or personal achievements, as well as opportunities for personal development and fulfillment, thereby causing positive emotions and an active coping or problem-solving style (for a review, see Llorens, del Libano, & Salanova, 2009).

The theoretical premises of the RED Model indicate that both work/extra-organizational as well as job demands and job and personal resources are responsible for two distinct psychological processes that may develop over time in the form of spirals, namely, the spiral of deteriorating health and the spiral of motivation. The model starts with the pre-existence of certain levels of perceived efficacy beliefs, i.e., self-efficacy or collective efficacy. Efficacy beliefs define the prism through which the worker evaluates his or her work environment (work demands and resources). As a result of low efficacy beliefs, the person thinks that they cannot control their environment effectively, which will enhance the perception of threatening demands and lack of work resources. This situation increases the likelihood of the person experiencing higher levels of psychological distress and the appearance of negative organizational consequences. In turn, over time these negative organizational consequences may influence the decrease in the perception of personal resources, following the spiral of deteriorating health. In contrast, when efficacy beliefs are high and people believe they are able to control their environment properly, they are more likely to perceive more challenging demands and work resources. This in turn increases the chances of these people enjoying higher levels of psychosocial well-being and leads to better performance, quality of work, and commitment to the organization. These positive effects could be responsible for the increased levels of personal resources following, in this case, the spiral of motivation (Llorens, del Libano, & Salanova, 2009).

The model has been validated at the individual level in different occupational (del Libano, Llorens, Salanova, & Schaufeli, 2012; Llorens, Bakker, Schaufeli, & Salanova, 2006; Salanova, Llorens, & Schaufeli, 2011) and pre-occupational samples (college students; Llorens, Schaufeli, Bakker, & Salanova, 2007; Salanova, Martínez, & Llorens, 2012). Recently, the model has been validated using collective measures in a sample of 533 employees grouped in 62 teams, with 62 supervisors and 13 organizations (Torrente, Salanova, Llorens, & Schaufeli, 2012). The results of this validation show that when teams have healthy resources (supportive team climate, coordination, and teamwork), both their intra- and extra-role performance is better (as assessed by the supervisor), but only when they themselves feel better (that is, more engaged).

## Work engagement

Work engagement has traditionally been defined as a positive state of mind associated with work which is characterized by vigor, dedication, and absorption. Rather than a specific, momentary state it refers to a more persistent affective-cognitive state that is not focused on a single object, event, or situation (Schaufeli, Salanova, González-Romá, & Bakker, 2002).

Specifically, vigor is characterized by high levels of energy and mental resilience while working and the desire to invest effort in the work being done even when difficulties arise. Dedication indicates high job involvement, together with the demonstration of a sense of significance, enthusiasm, inspiration, pride, and challenge with regard to the work. Finally, absorption occurs when the worker is fully concentrated on the work at hand, at the same time experiencing a feeling that time "flies". Likewise, he or she has difficulty in breaking away from what is being done due to the heavy dose of enjoyment and concentration that are being experienced (Salanova, 2009, p. 157).

Scientific research has shown that engagement is important because it increases performance and quality (Salanova, Agut, & Peiró, 2005; Salanova, Llorens, Cifre, Martínez, & Schaufeli, 2003; Salanova, Martínez, & Llorens, 2012; Torrente et al., 2012), job satisfaction, and organizational commitment (del Libano et al., 2012; Llorens et al., 2006). Similarly, engagement has a positive effect on life satisfaction and a negative effect on depressive symptoms (Hakanen & Schaufeli, 2012). Engaged employees are more committed to the organization, have lower rates of absenteeism, and have no intention of leaving the organization (Schaufeli, 2012). In addition, these employees experience positive emotions, and enjoy good mental and psychosomatic health, especially when compared with workaholics (Schaufeli, 2012). That is, having engaged employees can provide organizations with a competitive advantage, since such employees offer higher quality service, as perceived by customers. They also make fewer mistakes, suffer fewer injuries and accidents, deploy more innovative behaviors, and are evaluated better by their supervisors in terms of effectiveness and job performance than less engaged employees.

While knowing the consequences of engagement is important, so is knowing the antecedents that enable this positive mental work-related state to be generated. Research shows that the more work resources there are available in the workplace, the higher the probability of having more engaged employees will be (Salanova, Grau, Cifre, & Llorens, 2000). A review of the literature points to work resources (e.g., autonomy, climate of social support, feedback) as potential enhancers of engagement. Within work resources, a positive relationship has been found between social resources, such as organizational trust (Acosta, Salanova, & Llorens, 2012) or healthy organizational practices that promote social support in work teams and engagement at work (Salanova, Cifre et al., 2011). In the collective engagement of

work teams, social resources (supportive team climate, coordination and interdependence of tasks) also play an important role as antecedents (Torrente et al., 2012). The relationship between engagement and other resources – more particularly information and communication resources (time control and method control) – has been studied, the results showing a positive relationship between increasing these task resources and engagement. Research has shown that work resources such as variability in the required professional skills and social support are more predictive of work engagement under conditions of high work demands (e.g., high workload, emotionally charged work) (Schaufeli, 2012).

In addition, research has provided evidence of the key role played by personal resources in this process. These are defined as belonging to the people that make up the team and who, either alone or in interaction with both work and extra-organizational resources, are functional when it comes to facing work or extra-organizational demands (Salanova, Martinez, & Llorens, 2012). But they also have a value in themselves as sources of motivation, learning, and development (Xanthopoulou et al., 2007), and as mechanisms with which to expand and construct other personal resources in a sustainable manner (Fredrickson, 2001). One of the key personal resources to increase engagement is self-efficacy (Hernández, Llorens, & Rodríguez, 2014; Llorens et al., 2007; Salanova, Llorens, & Schaufeli, 2011).

### Self-efficacy and engagement

According to the Social Cognitive Theory (SCT) proposed by Bandura (1997, p. 3), self-efficacy is defined as "beliefs in one's capabilities to organize and execute courses of action required to produce certain achievements or results". Self-efficacy is not a general belief but is instead specific to particular domains or areas of functioning (e.g., work) (Salanova, Grau, Cifre, & Llorens, 2000). Hence, there are people with high levels of self-efficacy for certain tasks or under certain conditions (e.g., public speaking), and low levels of self-efficacy in other domains and circumstances (e.g., for writing in English).

Bandura (2000) found that efficacy beliefs affect how we behave, what we think, and how we feel. With regard to our behavior, we tend to choose the tasks which we feel capable of doing and to avoid those which we believe exceed our capabilities. Second, efficacy beliefs determine the amount of effort that is made to meet challenges and the amount of time or persistence spent on trying to accomplish something. Low levels of self-efficacy are associated with early dropouts, while elevated levels imply effort and perseverance. Moreover, efficacy beliefs also affect our thoughts and feelings. Thus, people who consider themselves ineffective at coping with environmental demands exaggerate the extent of their deficiencies and the potential difficulties imposed by the environment. These negative thoughts create stress and hinder the use of available resources, whereas people who perceive themselves as being effective focus their efforts on

the demands of the situation and strive to address them in a suitable fashion.

Previous research conducted in the employment context has shown that efficacy beliefs have an influence on different aspects: (1) the choice and selection of responses, as well as people's effort and perseverance, when confronted with situations where they are faced with obstacles (Llorens, García-Renedo, & Salanova, 2005); (2) the type of coping strategy used to deal with the work demand (Salanova, Grau, & Martinez, 2006); (3) motivation and commitment in the activities undertaken (Llorens et al., 2007); and (4) engagement in one's work and in one's studies as cycles and positive spirals (Salanova, Llorens, & Schaufeli, 2011).

But what generates these levels of self-efficacy needed to raise the levels of work engagement? According to the SCT, there are four sources of self-efficacy: (1) success stories, mastery experiences, or execution achievements, (2) vicarious learning provided by social models, through the observation of the failures or successes of others, (3) physiological and emotional states (signs of weakness or sweating and nervousness are interpreted as a lack of capacity, while positive displays such as feelings of peace and joy are interpreted as signs of mastery and control), and (4) verbal persuasion (Bandura, 2000). While it is true that all these sources generate efficacy, verbal persuasion is presented as a key antecedent in the organizational context. It consists in social reinforcement, positive criticism, compliments, and words of encouragement, i.e., it involves the development of a climate of positive leadership.

### Leadership: Source of self-efficacy

According to the Social Cognitive Theory, employees' behavior is the result of a combination of personal resources, motivation, and contextual resources or the social environment at work. As stated by Bandura (2000), leadership can be considered one of the keys to developing self-efficacy at work and its positive consequences on workers' well-being and performance. One type of leadership that can act as an engine driving self-efficacy is supportive leadership, or transformational leadership. This is defined as a management style in which the leader extends the interests of his or her employees, while also generating an awareness and acceptance of the goals and mission of the group, putting the interests of the group before their own (Bass, 1985). Supportive and transformational leaders have the potential to exert an influence on the psychological well-being of their employees (Turner, Barling, & Zacharatos, 2002) due to the very characteristics of these leaders. Specifically, they are sources of social support and feedback, they play a clarifying role, and they make followers perceive a high degree of justice and equity by providing both material and social/emotional resources, such as recognition.

Different studies have shown that leadership acts as a very powerful social work resource. Specifically, there is evidence that transformational leadership reduces the risk of

heart disease, as well as job stress and burnout (see Salanova, 2009). In addition, it also increases well-being (Nielsen & Munir, 2009; Nielsen, Yarker, Randall, & Munir, 2009), acts as a driver of goal congruence, job clarity, and work satisfaction (Schulz, Greenley, & Brown, 1995), confidence (Harvey, Kelloway & Duncan-Leiper, 2003) perceived justice (Piccolo, Bardes, Mayer, & Judge, 2008), feelings of control (Sparr & Sonnentag, 2008), engagement and positive affect (Llorens, Salanova, & Losilla, 2009). It also develops healthy employees (i.e., efficacy beliefs, engagement, and resilience), improves the extra- and intra-role performance of teams (Cruz-Ortiz, Salanova, & Martinez, 2013; Salanova, Llorens et al., 2012; Torrente et al., 2012) and increases performance (Dumdum, Lowe, & Avolio, 2002). Different studies have found evidence of the mediating role of efficacy beliefs in the relationship between transformational leadership and well-being at work (Walumbwa, Bruce, Avolio, & Zhu, 2008; Walumbwa, Wang, Lawler, & Shi, 2004), and between this

type of leadership and performance (Pillai & Williams, 2004). Hence, one of the contributions of this study to scientific research lies in the fact that it studies the antecedents of engagement in the public administration, considering both personal resources (self-efficacy) and one of their sources par excellence, namely, transformational leadership.

### The present study

In view of previous research, the objective of this study is to test the relationship between transformational leadership and work engagement, bearing in mind the mediating role of the professional self-efficacy of employees working in a Public Administration (City Hall). Specifically, the hypothesis of this study is the following: we expect professional self-efficacy to fully mediate the relationship between leadership and work engagement perceived by the City Hall employees (see Figure 1).

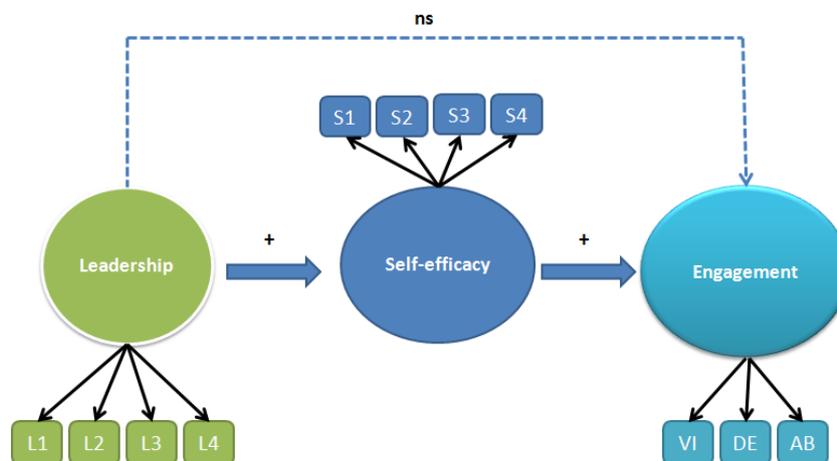


Figure 1. Hypothesized model.

## Method

### Sample and Procedure

The sample is composed of 271 employees in a public administration, more specifically a City Hall. It is a convenience sample and the data were collected in 2006-2007. Fifty-five percent of the participants were women, with a mean age of 33 years ( $SD = 2.17$ ), 40% had university qualifications (associate or bachelor's degrees), and 85% had a permanent contract with a mean figure of 23 years ( $SD = 10.23$ ) working at the City Hall. Since the City Hall has 600 employees and 271 (45%) participated in the study, the minimum of 240 employees needed to be considered a representative sample with a margin of error of 0.015 and 90% confidence was reached. The sample was also suitable for computing SEM analyses, as results show that for a power

of .80 and 40 degrees of freedom, a sample of 252 observations is needed (MacCallum, Browne, & Sugawara, 1996).

With regard to the procedure, the City Hall first contacted the research team because they were interested in evaluating the Psychosocial Risks in the local administration. Following the initial interviews, the instruments were revised and adapted to the particular characteristics of the City Hall. After agreeing to take part in the study, the questionnaires for evaluating Psychosocial Risks were filled out. Each participant received an informative letter in which the objectives of the project and the procedure for filling out the questionnaires were indicated. The questionnaires were administered (30 minutes approximately) online and could therefore be filled out during work time or from any personal computer. The confidentiality of the data was guaranteed.

## Measures

The variables were structured following the RED Model (Resources-Experiences-Demands). In this case its validity and the empirical relationships among the variables have already been proven in previous research (Salanova, Cifre et al., 2007 and 2011). The present study is focused on the motivation process of the RED Model, and includes three variables: leadership, professional self-efficacy, and work engagement. The employees of the City Hall completed the RED questionnaire using a Likert-type scale from 0 (*never*) to 6 (*always*), thinking about the environment in their workplace. The variables are described as follows.

Transformational leadership was measured by four items from the RED questionnaire (Salanova, Cifre et al., 2007 and 2011). An example item is: *'In my job, the person supervising me treats employees taking into account their feelings and opinions'* ( $\alpha=.95$ ).

Professional self-efficacy was tested by four items from the RED Questionnaire (Salanova, Cifre et al., 2007 and 2011). An example item is: *'I am able to do my job well although I have to solve difficult problems'* ( $\alpha=.92$ ).

Work engagement was tested by 17 items using the Spanish version of the *Utrecht Work Engagement Scale* (UWES; Salanova, Grau, Llorens, & Schaufeli, 2001), which includes three dimensions: (1) Vigor (6 items;  $\alpha=.85$ ; *'I can continue working for very long periods at a time'*), (2) Dedication (6 items;  $\alpha=.90$ ; *'I am involved in my job'*), and (3) Absorption (5 items,  $\alpha=.84$ ; *'Time flies when I am working'*).

## Data Analyses

First, descriptive analyses (i.e., means, standard deviations), inter-correlations and reliability analyses (Cronbach's alpha) were calculated using IBM SPSS Statistics 21.0. Second, Harman's single factor test (see Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) was computed with AMOS 21.0 to test for bias due to common method variance.

Finally, we implemented Structural Equation Modeling (SEM) using AMOS 21.0 to test the hypothesized structural relationships. To do so, the different steps described by Baron and Kenny (1986) with latent factors and Sobel's test (Sobel, 1982; cf. Wood, Goddman, Beckmann, & Cook, 2008) were computed. Following James, Mulaik, and Brett (2006), two models were tested in order to verify the hypothesis: M1-Fully Mediated Model, which assumes that self-efficacy is fully mediating the relationship between leadership and work engagement (see Figure 1), and M2-Partially Mediated Model, which assumes that self-efficacy is only partially mediating the relationship between leadership and work engagement; that is, there is also a direct relationship between leadership and work engagement.

For the SEM analyses, the following methods for estimating maximum likelihood were used by calculating absolute and relative indices of goodness of fit (Marsh, Balla, & Hau, 1996): the  $\chi^2$  index ( $p > .05$ ), relative  $\chi^2$  index ( $\chi^2/df$ ; up

to 5.0), the Root Mean Square Error of Approximation (RMSEA), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), and the Incremental Fit Index (IFI). Values smaller than .08 and greater than .90 indicate a good fit for RMSEA (Brown & Cudeck, 1993) and for the rest of the indices (Hornung & Glaser, 2010; Hoyle, 1995; James et al., 1982), respectively. Finally, the Akaike Information Criterion (AIC; Akaike, 1987) was computed to compare competing non-nested models; in this case, the lower the AIC index is, the better the fit is.

## Results

### Descriptive Analyses and Harman Test

Table 1 shows the means, standard deviations, and inter-correlations among the variables in the study. Results show that all the scales fit the reliability criteria proposed by scientific research (Nunnally & Bernstein, 1994). Furthermore, analyses of the correlations show that, as expected, all scales are positively and significantly interrelated in 100% of the cases (mean  $r = .41$ ) (see Table 1).

Second, Harman's single factor test (e.g., Podsakoff et al., 2003) reveals a poor fit to the data,  $\chi^2(44)=1318.71$ , RMSEA=0.33, CFI=0.51, TLI=0.39, IFI=0.51. Furthermore, in the same instrument different headings were used in the different parts of the questionnaire in order to hold participants' attention; this is a valid strategy to avoid the common method bias from the design of the research (Podsakoff, MacKenzie, & Podsakoff, 2012). It thus seems that bias due to common method variance does not affect the dataset. Hence, the variance of the variables is a consequence of the psychosocial constructs under study and is not due to the evaluation method.

**Table 1.** Means (*M*), Standard Deviation (*SD*), internal consistency (Cronbach's alpha on the diagonal), and correlations of the variables in the study ( $n = 271$ ).

Variable	<i>M</i>	<i>SD</i>	(1)	(2)	(3)	(4)	(5)
1. Leadership	3.68	1.85	.95				
2. Self-efficacy	5.08	.95	.19**	.92			
3. Vigor	4.40	1.06	.40***	.41***	.85		
4. Dedication	3.51	1.58	.48***	.26***	.61***	.90	
5. Absorption	3.50	1.33	.39***	.26***	.58***	.57***	.84

Note. All the correlations are significant at \*\*\* $p < .001$  and \*\* $p < .01$ .

### Model Fit: Structural Equation Modeling

Table 2 shows the results of SEM regarding the relationship among leadership, professional self-efficacy, and work engagement. The model consists of one exogenous (leadership) and two endogenous variables (professional self-efficacy and work engagement). Furthermore, leadership, professional self-efficacy, and work engagement (vigor, dedication, and absorption) were taken as latent variables. Leadership and professional self-efficacy comprise four indicators

(items), while engagement is composed of three (scales; i.e., vigor, dedication, and absorption).

In accordance with Baron and Kenny (1986), SEM results show that the hypothesized model, M1-Fully Mediated Model, in which self-efficacy fully mediates the relationship between leadership and work engagement,  $\chi^2(42)=158.95$ ,  $\chi^2/df=3.78$ . RMSEA=.10, CFI=.95, TLI=.94, IFI=.96, AIC=206.95, does not fit the data well, Delta  $\chi^2(1)=62.25$ ,  $p<.001$ , compared to M2-Partially Mediated Model, which also includes a direct relationship between leadership and work engagement,  $\chi^2(41)=96.70$ ,  $\chi^2/df=2.35$ ; RMSEA=.07, CFI=.98, TLI=.97, IFI=.98, AIC=146.71. These results provide evidence in favor of M2-Partially Mediated Model: (1) leadership is positively and significantly related to work engagement through professional self-efficacy, and also (2) there is a direct significant relationship between leadership and work engagement,  $\beta = .49$ ,  $p < .001$ .

Concerning the mediation process, three of the four processes for latent variables of Baron, and Kenny (1986) were met in the best model, M2: (1) leadership were positively and significantly related with the mediating variable (professional self-efficacy),  $\beta = .17$ ,  $p<.01$ ; (2) professional self-efficacy is positively and significantly related to work engagement,  $\beta=.40$ ,  $p<.001$ ; (3) leadership is positively and significantly related to work engagement,  $\beta=.55$ ,  $p<.001$ . However, (4) the relationship between leadership and work engagement continues to be significant when we control for professional self-efficacy,  $\beta = .49$ ,  $p < .001$ . These results offer evidence that professional self-efficacy does not fully mediate the relationship between leadership and work engagement. The Sobel test (1982; see Wood et al., 2008) shows that the indirect effect from leadership to work engagement through professional self-efficacy is statistically significant, Sobel test=2.45,  $p<.01$ .

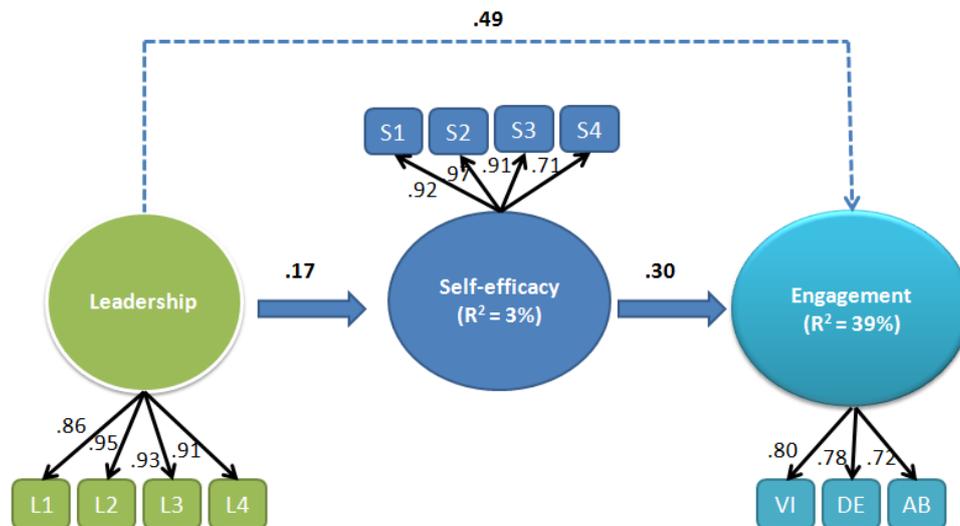
**Table 2.** Fit indices of the Structural Equation Models ( $n = 271$ ).

Models	$\chi^2$	$df$	$\chi^2/df$	RMSEA	CFI	TLI	IFI	AIC	$\chi^2$ diff.
M1	158.95	42	3.78	.10	.95	.94	.96	206.95	
M2	96.70	41	2.35	.07	.98	.97	.98	146.71	62.25***

Notes.  $\chi^2$  = Chi-square;  $df$  = degrees of freedom;  $\chi^2/df$  = relative Chi-square; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; IFI = Incremental Fit Index; AIC = Akaike information Criterion; diff. = difference. \*\*\* $p < .001$ .

To sum up, results using SEM gave convincing evidence in favor of M2-Partial Mediation Model. Figure 2 offers a graphical representation of this model. All the manifest variables loaded significantly on the intended latent factors, with values ranging from .71 to .97. Second, a review of the paths for M2 reveals that, as expected, leadership is significantly and

positively related to professional self-efficacy,  $\beta = .17$ ,  $p < .01$ ,  $R^2 = 3\%$ , which also has a significant positive relationship with work engagement,  $\beta = .30$ ,  $p < .001$ ,  $R^2 = 19\%$ . Finally, leadership also shows a direct, significant positive relationship with work engagement,  $\beta = .49$ ,  $p < .001$ ,  $R^2 = 12\%$ .



**Figure 2.** Structural model of leadership, professional self-efficacy and work engagement ( $N=271$ ). Note: All standardized coefficients are significant at  $p<.001$ .

Furthermore, the results give evidence in favor of the reliability and convergent validity for latent variables in the SEM model since: (1) Composite Reliability, CR, and Analyses of Variance Extracted, AVE, are higher than 0.7 and 0.5, respectively (CRs ranges from .81 a .95; AVE ranges from .58 a .83). Also, all factor loadings are highly significant since the regression weights are significantly different from zero at the 0.001 level (two-tailed) (Fornell & Larcker, 1981). To test the discriminant validity, we compare the squared correlations of any pair of latent variables with the AVE of each construct (Fornell & Larcker, 1981). Results also show evidence for the discriminant validity in second latent factors (100%). Thus, the squared correlations of any pair of latent variables were smaller than the values of AVEs. Thus, there is enough evidence to stress that the different constructs of the model are significantly different.

## Discussion

The aim of this study was to understand the relationship between transformational leadership and engagement by considering the mediating role of the professional self-efficacy of the employees of a public administration (City Hall). We expected self-efficacy at work to fully mediate the relationship between leadership and engagement perceived by City Hall employees.

Results of SEM showed that, as expected, self-efficacy indeed mediates the relationship between leadership and work engagement in the public administration staff. Specifically, leadership is positively and significantly related to self-efficacy, which in turn is positively and significantly related with work engagement. In addition, direct evidence has also been found to show how leadership plays such a powerful role not only in self-efficacy but also in engagement. Therefore, it appears that the efficacy beliefs about their abilities to successfully perform their work held by the public administration staff who perceived a supportive leadership style are increased, and they also experience higher levels of engagement, that is, higher levels of energy, dedication, and absorption. Moreover, these levels of engagement are increased not only due to the mediating role of efficacy beliefs, but also thanks to the role of the leader.

These results are in line with earlier research, where positive relationships between leadership, self-efficacy, and engagement have been shown (e.g., Nielsen & Munir, 2009; Nielsen et al., 2009; Salanova, Llorens et al., 2012; Torrente et al., 2012; Turner et al., 2002). Specifically, previous research (e.g., Walumbwa et al., 2004 and 2008) has noted the mediating role of efficacy beliefs in the relationship between transformational leadership and well-being at work, so the results of this study agree with those obtained above. This study supports the evidence of the power of transformational and supportive leadership on psychological well-being at work, since in addition to being related to levels of engagement, this type of leadership is also positively related to self-efficacy, which is the main personal resource for meeting

work demands according to the RED model (Salanova, Cifre et al., 2007 and 2011). Results are in line with previous research, which has shown that transformational and supportive leaders have the potential to influence the psychological well-being of employees (e.g., Turner et al., 2003), improve the extra- and intra-role performance of teams (e.g., Salanova, Llorens et al., 2012; Torrente et al., 2012) and increase overall performance (e.g., Dum Dum et al., 2002). Therefore, we can conclude that the Public Administration should encourage supportive and transformational leadership, as well as efficacy beliefs in their workers, to achieve increased levels of engagement among employees. In sum, the results support the hypothesis in this research, and we can say that it has been fulfilled.

## Limitations and Future Research

Despite its strengths, this study also has some limitations. First, it is based on a convenience sample, which compromises the generalizability of the results. However, the data were collected in a real context by including workers that belonged to different departments of the City Hall and who had different leaders. The second limitation is that data were collected by self-report questionnaires, which could lead to common variance bias. However, the Harman test reveals that there is no bias in the common variance method in the database. In future studies and in view of the relevance of the work units in this context, it would be interesting to include more public administrations (at least 30) to replicate the results obtained by adding the team- or organization-level scores. It would also be interesting to include the users' perceptions of the service so as to be able to compare them with the assessment of service quality or even the performance evaluation carried out by the supervisors, while also studying the cross-level effects and interactions by analyzing multilevel data. Finally, another limitation of the study is that it is cross-sectional. In future studies it would be interesting to include longitudinal designs (2 or 3 times of data collection) to test cycles and spirals of leadership, efficacy beliefs, and work engagement.

## Theoretical and Practical Implications

The present study offers different theoretical and practical contributions. Theoretically, it extends research on the mediating role of efficacy beliefs in the relationship between leadership and work engagement in the public administration context. The results provide evidence to support the RED Model (Salanova, Cifre et al., 2007 and 2011) in this context, since it shows how the existence of certain work resources (supportive and transformational leadership) generates psychosocial well-being (engagement), personal resources (professional efficacy) also having an influence as postulated in this model. In addition, this research contributes to a deeper understanding of the relationship between social resources at work – in this case leadership and work

well-being – namely engagement. It also provides data on the role of personal resources (self-efficacy) in the relationship between work resources and work well-being.

From a practical standpoint, the results of this study may play a key role in implementing intervention strategies for the development of professional engagement in the public sector. Specifically, the results indicate that to increase work engagement it is necessary to implement intervention strategies that facilitate the development of employees' levels of self-efficacy, which is achieved by promoting the development of supportive leaders, leaders who transform the lives of employees at work. To this end, it would be important to ensure this intervention focuses on both the individual and organizational levels, for example, by performing periodic assessments of psychosocial factors at work in order to eliminate or control for potential psychosocial risks and maximize the positive aspects. This could be accomplished by implementing management development activities directed toward achieving a supportive leadership style, and establishing effective communication between managers and employees, which allows workers to receive feedback on the outcome of their work and which they can use to participate

in the organization and design of tasks and jobs, and so on. That is, we are dealing with actions aimed at increasing work resources so as to enable workers to meet the demands of their jobs satisfactorily and thereby increase employees' well-being.

### Final Note

The results of the study reveal the relationship between social resources and psychosocial well-being at work, through personal resources. Furthermore, the postulates of the RED Model (Salanova, Cifre et al., 2007 and 2011) are supported within the context of a Public Administration. The present study provides information about the relevance of the type of leadership that should be implemented in the Public Administration in order to enhance well-being among employees, which will in turn have positive repercussions on the quality of the public sector.

**Acknowledgment.**– This study was supported by a grant from the Spanish Ministry of Economy and Competitiveness (PSI2011-22400).

### References

- Acosta, H., Salanova, S., y Llorens, S. (2012). ¿Cómo predicen las prácticas organizacionales el engagement en el trabajo en equipo?: El rol de la confianza organizacional. *Ciencia y Trabajo*, 13, 125-134.
- Akaike, H. (1987). Factor analysis and AIC. *Psychometrika*, 52, 317–332. Doi: 10.1007/BF02294359
- Bandura, A. (1997). *Self-efficacy. The exercise of control*. New York: Freeman & Co.
- Bandura, A. (2000). Exercise of human agency through collective efficacy. *Current Directions in Psychological Science*, 9, 75-78. Doi: 10.1111/1467-8721.00064
- Baron, R. M., y Kenny, D. A. (1986). The moderator- mediator variable distinction in social psychological research: Conceptual, strategic and statistical consideration. *Journal of Personality and Social Psychology*, 51, 1173-1182. Doi: 10.1037/0022-3514.51.6.1173
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.
- Brown, M. W., y Cudeck, R. (1993). Alternative ways of assessing model fit. En K. A. Bollen, y J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Newbury Park, CA: Sage.
- Cruz-Ortiz, V., Salanova, M., y Martínez, I. (2013). Liderazgo transformacional y desempeño grupal: unidos por el engagement grupal. *Revista de Psicología Social*, 28, 183-196.
- Del Libano, M., Llorens, S., Salanova, M., y Schaufeli, W. B. (2012). About the bright and dark sides of self-efficacy: Work engagement and workaholism. *The Spanish Journal of Psychology*, 15, 688-701. Doi: 10.5209/rev\_SJOP.2012.v15.n2.38883
- Demerouti, E., Bakker, A. B., Nachreiner, F., y Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86, 499–512. Doi: 10.1037/0021-9010.86.3.499
- Dumdum, U. R., Lowe, K. B., y Avolio, B. J. (2002). A meta-analysis of transformational and transactional leadership correlates of effectiveness and satisfaction: an update and extension. En B. J. Avolio, y F. J. Yammarino (Eds.), *Transformational and charismatic leadership: the road ahead* (pp. 36–66). Oxford: Elsevier Science.
- Fornell, C., y Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39-50. Doi: 10.2307/3151312
- Fredrickson, B. (2001). The role of positive emotions in positive psychology. The broaden-and-build theory of positive emotions. *American Psychologist*, 56, 218-226. Doi: 10.1037/0003-066X.56.3.218
- Hakanen, J. J., y Schaufeli, W. B. (2012). Do burnout and work engagement predict depressive symptoms and life satisfaction? A three-wave seven-year prospective study. *Journal of Affective Disorders*, 141, 415-424. Doi: 10.1016/j.jad.2012.02.043
- Harvey, S., Kelloway, E. K., y Duncan-Leiper, L. (2003). Trust in management as a buffer of overload-strain relationships. *Journal of Occupational Health Psychology*, 8, 306-315. Doi: 10.1037/1076-8998.8.4.306
- Hernández, I., Llorens, S., y Rodríguez, A. (2014). Empleados saludables y calidad de servicio en el sector sanitario. *Anales de Psicología*, 30, 247-258.
- Hornung, S., y Glaser, J. (2010). Employee responses to relational fulfilment and work-life benefits. *International Journal of Manpower*, 31, 73-92.
- Hoyle, R. H. (1995). The structural equation modeling approach: Basic concepts and fundamental issues. En R. H. Hoyle (Ed.), *Structural Equation Modeling, Concepts, Issues and applications* (pp. 1-15). Thousand Oaks, Ca: Sage.
- James, L. R., Mulaik, S. A., y Brett, J. M. (2006). A tale of two methods. *Organizational Research Methods*, 9, 233-244. Doi: 10.1177/1094428105285144
- Karasek, R. A., y Theorell, T. (1990). *Healthy work: Stress, productivity and the reconstruction of working life*. Nueva York: Basic Books.
- Karasek, R. A. (1979). Job demands, job decision latitude and mental strain. Implications for job redesign. *Administrative Science Quarterly*, 24, 285-308.
- Llorens, S., Bakker, A. B., Schaufeli, W. B., y Salanova, M. (2006). Testing the robustness of the job demands-resources model. *International Journal of Stress Management*, 13, 378–391. Doi: 10.1037/1072-5245.13.3.378
- Llorens, S., del Libano, M., y Salanova, M. (2009). Modelos teóricos de salud ocupacional. En M. Salanova (Ed.), *Psicología de la Salud Ocupacional* (pp. 63–93). Madrid: Síntesis.
- Llorens, S., García-Renedo, M., y Salanova, M. (2005). Burnout como consecuencia de una crisis de eficacia: Un estudio longitudinal en profesores de secundaria. *Revista de Psicología del Trabajo y de las Organizaciones*, 21, 55-70.
- Llorens, S., Salanova, M., y Losilla, J. (2009). Liderazgo transformacional y capital psicológico positivo: Un estudio de caso en una empresa de la construcción. *Directivos construcción*, 220, 48-55.
- Llorens, S., Schaufeli, W. B., Bakker, A. B., y Salanova, M. (2007). Does a positive gain spiral of resources, efficacy beliefs and engagement exist? *Computers in Human Behavior*, 23, 825-841. Doi: 10.1016/j.chb.2004.11.012
- MacCallum, R. C., Browne, M. W., y Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 2, 130-149. Doi: 10.1037/1082-989X.1.2.130
- Marsh, H. W., Balla, J. R., y Hau, K.T. (1996). An evaluation of incremental Fit Indices: A clarification of mathematical an empirical properties. En G.A. Marcoulides, y R.E. Schumacker (Eds.), *Advanced structural equation modeling, issues and techniques* (pp. 136-162). Mahwah, N.J.: Lawrence Erlbaum Associates Publishers.
- Nielsen, K., y Munir, F. (2009). How do transformational leaders influence followers' affective well-being? Exploring the mediating role of self-efficacy. *Work & Stress*, 4, 313-329. Doi: 10.1080/02678370903385106

- Nielsen, K., Yarker, J., Randall, F., y Munir, F. (2009). The mediating effects of team and self-efficacy on the relationship between transformational leadership, and job satisfaction and psychological well-being in healthcare professionals: a cross-sectorial questionnaire survey. *International Journal of Nursing Studies*, *46*, 1236-1244. Doi: 10.1016/j.ijnurstu.2009.03.001
- Nunnally, J. C., y Bernstein, I. H. (1994). *Psychometric Theory*, 3rd ed. New York: McGraw-Hill.
- Piccolo, R. F., Bardes, M., Mayer, D. M., y Judge, T. A. (2008). Does high quality leader-member exchange accentuate or attenuate organizational injustice? *European Journal of Work and Organizational Psychology*, *17*, 273-298. Doi: 10.1080/13594320701743517
- Pillai, R., y Williams, E. A. (2004). Transformational leadership, self-efficacy, group cohesiveness, commitment, and performance. *Journal of Organizational Change Management*, *17*, 144-159. Doi: 10.1108/09534810410530584
- Podsakoff, P. M., MacKenzie, S. B., y Podsakoff, N. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, *63*, 539-569. Doi: 10.1146/annurev-psych-120710-100452
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., y Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*, 879-903. Doi: 10.1037/0021-9010.88.5.879
- Salanova, M., Grau, R., y Martínez, I. (2006). Job Demands and coping behaviours: the moderating role of professional self-efficacy. *Psychology in Spain*, *10*, 1-7.
- Salanova, M., Grau, R., Cifre, E., y Llorens, S. (2000). Computer training, frequency of use and burnout: the moderating role of computer self-efficacy. *Computers in Human Behavior*, *16*, 575-590. Doi: 10.1016/S0747-5632(00)00028-5
- Salanova, M. (2009). *Psicología de la salud ocupacional*. Madrid: Editorial Síntesis.
- Salanova, M., Agut, S., y Peiró, J. M. (2005). Linking organizational resources and work engagement to employee performance and customer loyalty: The mediation of service climate. *Journal of Applied Psychology*, *90*, 1217-1227. Doi: 10.1037/0021-9010.90.6.1217
- Salanova, M., Cifre, E., Martínez, I.M., Llorens, S., y Lorente, L. (2011). Psychosocial risks and positive factors among construction workers. En S. Clarke, C. Cooper, y R. Burke (Eds.), *Occupational health and safety: Psychological and behavioral challenges* (pp. 295-320). UK: Gower.
- Salanova, M., Cifre, E., Martínez, I.M., y Llorens, S. (2007). *Caso a caso en la prevención de riesgos psicosociales*. España: Lettera Publicaciones.
- Salanova, M., Grau, R., Llorens, S., y Schaufeli, W. B. (2001). Exposición a las tecnologías de la información, *burnout* y *engagement*: el rol modulador de la autoeficacia. *Revista de Psicología Social Aplicada*, *11*, 69-90.
- Salanova, M., Llorens, S., Cifre, E., Martínez, I. M., y Schaufeli, W. B. (2003). Perceived collective efficacy, subjective well-being and task performance among electronic work groups: An experimental study. *Small Group Research*, *34*, 43-73. Doi: 10.1177/1046496402239577
- Salanova, M., Llorens, S., Cifre, E., y Martínez, I. M. (2012). We need a Hero! Towards a validation of the HHealthy & Resilient Organization (HERO) model. *Group & Organization Management*, *37*, 785-822.
- Salanova, M., Llorens, S., y Schaufeli, W. B. (2011). Yes, I can, I feel good, and I just do it! On gain cycles and spirals of efficacy beliefs, affect, and engagement. *Applied Psychology: An International Review*, *60*, 255-285. Doi: 10.1177/1059601112470405
- Salanova, M., Martínez, I., y Llorens, S. (2012). Success breeds success, especially when self-efficacy is related to an internal attribution of causality. *Estudios de Psicología*, *33*, 151-165. Doi: 10.1174/021093912800676420
- Salanova, M., y Schaufeli, W. B. (2009). *El engagement en el trabajo. Cuando el trabajo se convierte en pasión*. Madrid: Alianza.
- Schaufeli, W. B. (2012). Work Engagement. What do we know and where do we go? *Romanian Journal of Applied Psychology*, *14*, 3-10.
- Schaufeli, W. B., Salanova, M., González-Romá, V., y Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, *3*, 71-92. Doi: 10.1023/A:1015630930326
- Schulz, R., Greenley, J., y Brown, R.L. (1995). Organization, management, and client effects on staff burnout. *Journal of Health and Social Behavior*, *36*, 333-345. Doi: 10.2307/2137323
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. En S. Leinhardt (Ed.), *Sociological methodology* (pp. 290-312). Washington, DC: American Sociological Association.
- Sparr, J. L., y Sonnentag, S. (2008). Fairness perceptions of supervisor feedback, LMX, and employee well-being at work. *European Journal of Work and Organizational Psychology*, *17*, 198-225. Doi: 10.1080/13594320701743590
- Torrente, P., Salanova, M., Llorens, S., y Schaufeli, W. B. (2012). Teams make it work: How team work engagement mediates between social resources and performance in teams. *Psicothema*, *24*, 106-112.
- Turner, N., Barling, J., y Zacharatos, A. (2002). Positive Psychology at work. En C. Snyder, y J. Shane (Eds.), *Handbook of Positive Psychology* (pp. 715-728). New York: Oxford University Press.
- Walumbwa, F.O., Bruce, J., Avolio, B., y Zhu, W. (2008). How transformational leadership weaves its influence on individual job performance: the role of identification and efficacy beliefs. *Personnel Psychology*, *61*, 793-825. Doi: 10.1111/j.1744-6570.2008.00131.x
- Walumbwa, F. O., Wang, P., Lawler, J. J., y Shi, K. (2004). The role of collective efficacy in the relations between transformational leadership and work outcomes. *Journal of Organizational and Occupational Psychology*, *77*, 515-553. Doi: 10.1348/0963179042596441
- Wood, R. E., Goodman, J. S., Beckmann, N., y Cook, A. (2008). Mediation testing in management research: A review and proposals. *Organizational Research Methods*, *11*, 270-295. Doi: 10.1177/1094428106297811
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., y Schaufeli, W. B. (2007). How job and personal resources influence work engagement and financial turnover: A diary study in a Greek fast-food company. *International Journal of Stress Management*, *14*, 121-141. Doi: 10.1037/1072-5245.14.2.121

(Article received: 17-7-2013; revised: 20-12-2013; accepted: 07-01-2014)