EXAMINING THE IMPACT OF EMPLOYEE CORE SELF-EVALUATIONS AND ORGANISATIONAL TRUST ON WORK ENGAGEMENT
ANASTASIA KATOU

ABSTRACT
This study examines the impact of core self-evaluations (CSE) and organisational trust on work engagement through the intervening steps of employee pro-social voice and defensive silence during periods of financial and economic crisis. The research analysis is based on a sample of 1178 Greek employees working in 139 public and private organisations, which operate in the present context of the economic crisis. Data was obtained from multiple actors (senior managers, middle managers and employees). Using a comprehensive framework, the findings of the structural equation modelling suggest that the impact of personality on work engagement through employee pro-social voice and defensive silence is approximately equal to that of organisational trust, whilst the overall impact of organisational trust on work engagement is much stronger compared to that of personality. Furthermore, the study traces the dimensions of employee pro-social voice and defensive silence that have the most impact on work engagement in a labour context where unemployment is very high. Based on these findings, which underline the meaning of pro-social voice and defensive silence in turbulent times, the study has several theoretical and practical implications.

KEY WORDS
Core self-evaluations, organisational trust, pro-social voice, defensive silence, work engagement, Greece.

Introduction
During the current turbulent times of financial and economic crisis, work engagement is becoming central within many organisations which are attempting to maintain a competitive edge (Rees et al. 2013). In both private and public organisations, raising levels of work engagement is considered to be among the managerial strategies which aim to align employee interests more closely with organisational goals (Rees et al. 2013; Saks 2006). It may be argued that it is to the benefit of both employees and the organisation if employees choose to engage more with their work...
In particular, the thesis that engaged employees experience higher job satisfaction (Truss et al. 2006) and increased citizenship organisational behaviour (Rich et al. 2010) is supported. Employees exercise both their voice and silence to indicate their willingness or unwillingness to get involved in organisational decision-making (Pinder and Harlos 2001). In periods of financial and economic crisis, some employees may choose to express positive ideas and opinions, believing that they will help their organisations. However, other employees may not choose to speak, being afraid that, in cases in which their ideas and opinions are not welcomed by the organisation, they may soon join the unemployment pool. According to the typology of Van Dyne et al. (2003), intentionally expressing work-related ideas, information, or opinions under the feeling that these actions will benefit others, such as the organisation, is called pro-social voice, and an employee withholding ideas and information based on the fear that it may be personally risky to communicate these ideas and information is called defensive silence. In general, voice is expected to have positive effects on employee attitudes and behaviour, while silence is expected to have negative effects (Barry and Wilkinson 2016; Morrison 2014; Schlosser and Zolin 2012).

Taking into consideration the fact that many questions and issues with respect to voice and silence still remain unaddressed (Knoll et al. 2016; Morrison 2014), the purpose of this study is to investigate the extent to which individual employee pro-social voice (Brewster et al. 2007) and defensive silence have an impact on work engagement. We have focused on these two types of voice and silence because both are proactive in the sense that pro-social voice refers to intentionally expressing, and defensive silence to intentionally concealing, ideas, opinions and information that may advance work engagement. To the best of our knowledge, we are unaware of other studies that have simultaneously included these two types of voice and silence in this relationship.

Additionally, responding to calls (e.g. Edwards and Greenberg 2009; Morrison 2014) for more research that examines employee voice and silence in different contexts, we investigate whether employee voice and silence have positive or negative effects on work engagement in labour markets where the supply of certain skills is higher than demand, resulting in high unemployment. Greece is a typical example of such a labour market, as the unemployment rate has reached the level of about 25% due to the severe economic and financial crisis. Thus, considering that there is a lack of research on the effects of the financial and economic crisis on the voice system within an organisation (Prouska and Psychogios 2016), we believe that it is interesting to examine employee voice and silence in the unique context of the Greek labour market.

In particular, we argue that employee personality and organisational trust constitute two important factors that influence employee pro-social voice and defensive silence. We support the view that individual differences and demographic characteristics are two major determinants of voice or silence, which simply state that some individuals are more likely than others to speak up or to remain silent (Crant 2003). The five factor model (FFM) and core-self evaluations (CSE) are two constructs that are usually linked with voice or silence (Avery 2003; LePine and Van Dyne 2001). In the current study, considering that FFM and CSE are two correlated constructs (Judge et al. 2003) and that CSE are important predictors of employee outcomes (e.g., work engagement and job performance)
Examining the impact of employee core self-evaluations... (Bono and Judge 2003) we test whether CSE is an antecedent of employee voice or silence. Moreover, taking into consideration that pro-social voice and defensive silence refer to the intentional transfer - or lack thereof - of ideas, opinions and information, we support the view that if employees trust their organisation, they may share their ideas, opinions and information without hesitation (Dedahanov and Rhee 2015; Nikolaou et al. 2011). Thus, we argue that organisational trust has a substantial impact on employee voice and silence (Detert and Burris 2007).

To confirm the structure and contribution of the paper, and considering that previous researchers have outlined the potential importance of voice and silence, but have lagged in actual empirical work (Detert and Burris 2007; Schlosser and Zollin 2012), in this study we examine whether CSE and organisational trust predict employee pro-social voice and defensive silence. Taking into further consideration the fact that previous research supports the conclusion that CSE and organisational trust have positive effects on employee outcomes (Kim et al. 2015) and employee voice or silence is essential to employee outcomes (Fast et al. 2014), in the current study we test whether employee pro-social voice and defensive silence mediate in the relationship between CSE and organisational trust, and work engagement.

In summary, this study adds to our knowledge by testing the antecedents and consequences of pro-social voice and defensive silence during difficult economic times. Therefore, considering that this literature area is generally dominated by conceptual non-empirical papers, the current study provides valuable empirical insights. Accordingly, it tries to fill the research gap by examining employee voice and silence in different contexts.

1. Research framework and hypotheses

1.1. CSE and pro-social voice and defensive silence

The concept of core self-evaluations has primarily been described by Judge, Locke and Durham (1997). They argued that individuals make fundamental evaluations about themselves that differentiate people from one another (Judge and Kammeyer-Mueller 2011). People with high CSE believe that they have high self-efficacy in solving problems, high self-esteem that is worthy of respect, high emotional stability reflecting that they are optimistic, and internal locus of control meaning that they are in control of and responsible for what happens to them (Judge et al. 2002). These four specific dimensions of personality are unique and all fall under a term labelled CSE (Judge et al. 2003; Judge and Hurst 2007).

CSE plays an important role in motivating voice or silence (Morrison 2014). In general, it is believed that “individuals are more likely to engage in voice as their judgments of efficacy and safety increase, and more likely to remain silent as they decrease” (Morrison 2014: 180). Self-efficacy refers to the degree of effectiveness in reaching a desired result if the employee engages in voice, and safety or risk refers to the degree of negative consequences for the individual if the employee engages in voice. Research supports evidence that high (low) self-efficacy increases (decreases) voice, and the level of voice or silence depends on the degree to which it is considered by the employee to be safe to engage in voice (Morrison and Milliken 2000; Pinder and Harlos 2001; Premeaux and Bedeian 2003; Detert and Burris 2007; Detert and Trevino 2010). Accordingly, we hypothesise that:

H1(a): A positive relationship exists between CSE and employee pro-social voice.
H1(b): A negative relationship exists between CSE and employee defensive silence.

1.2. Organisational trust and pro-social voice and defensive silence

In management research, the effective functioning of organisations is generally attributed to trust (Holtz 2013; Wong et al. 2006). Trust within an organisation refers to the overall evaluation of an organisation’s trustworthiness as perceived by the employee (Puusa and Tolvanen 2006). At individual level, trust involves the daily interactions between supervisors and employees, and at organisational level, trust involves the relationships with a variety of important groups in the organisation. Considering that individual trust is the main determinant of organisational trust (Mishra 1996), we will not make any specific distinction between the two in this study. Although there are many components of organisational trust, there is evidence to suggest that integrity (i.e., the belief that the organisation is fair and just), competence (i.e., the belief that the organisation has the ability to do what it says it will do), and dependability (i.e., the belief that the organisation will do what it says it will do) significantly contribute to organisational trust (Schoorman et al. 2007).

Individuals who trust their organisations feel confident in expressing work-related ideas, information, or opinions in the belief that these actions will benefit the organisation, whereas employees who have a lower level of trust in their organisations withhold ideas and information based on the fear that it may be personally risky to communicate these ideas and information (Detert and Burris 2007; Dedahanov and Rhee 2015). Similarly, when there is a climate of trust, even under unfavourable conditions that prevail during periods of economic crisis, employees might speak up in an effort to help their organisation. On the contrary, if speaking up is considered to be dangerous in these unfavourable conditions, employees may prefer to remain silent (Nikolaou et al. 2011). Hence, we hypothesise the following:

H2(a): A positive relationship exists between organisational trust and employee pro-social voice.
H2(b): A negative relationship exists between organisational trust and employee defensive silence.

1.3. Pro-social voice, defensive silence and employee engagement

Employee work engagement is considered to be a foundational variable that influences organisational performance (Christian et al. 2011). It is usually defined as “a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences” (Locke 1976: 1304). Overall, engagement refers to the relationship between employees and their job (Mihail and Kloutsiniotis 2016). It is argued that work engagement is better understood as a multidimensional construct (Macey and Schneider 2008; Rees et al. 2013). In this study we follow Schaufeli et al. (2002) who distinguish work engagement into the three interrelated dimensions of vigour (i.e. high levels of energy and mental resilience while working), dedication (i.e. sense of significance, enthusiasm, inspiration, pride, and challenge), and absorption (i.e. being fully concentrated and happily engrossed in one’s work).

It is generally accepted that employee voice is associated with positive individual and organisational outcomes, whilst employee silence creates dissatisfaction and the disengagement of employees (Beer and Eisenstat 2000). Research suggests that voice increases levels of organisational commitment and employee motivation because employees believe that, by engaging in voice, they can influence business deci-
Examining the impact of employee core self-evaluations (Farndale et al. 2011; Zapata-Phelan et al. 2009). Similarly, research confirms that, in cases where employees feel that their ideas and opinions are valued by the organisation, this constitutes a major driver of work engagement (Rees et al. 2013; Robinson et al. 2004) or work satisfaction (Carr and Mellilo 2013). In contrast, studies support the theory that silence has a negative impact on organisational commitment, because if employees feel it is risky to speak up, they are less likely to demonstrate commitment (Deniz et al. 2013; Vakola and Bouradas 2005; Wong et al. 2006). Therefore, and taking into consideration the fact that few studies have tested the influence of voice or silence on work engagement (Rees et al. 2013), we hypothesise that:

**H3(a):** A positive relationship exists between employee pro-social voice and work engagement.

**H3(b):** A negative relationship exists between employee defensive silence and work engagement.

### 1.4. CSE, organisational trust and employee engagement

Previous research using CSE as an explanatory variable in the employment relationship (Judge et al. 1997) has supported the relationship of CSE to various outcome variables (Judge et al. 2003) including job performance or employee productivity (Bono and Judge 2003; Chang et al. 2012; Joo et al. 2012; Judge et al. 2004; Kacmar et al. 2009; Kim et al. 2015), job satisfaction (Bono and Judge 2003; Chang et al. 2012; Dormann et al. 2006; Judge et al. 2004), organisational commitment (Bass and Riggio 2006; Joo et al. 2012; Judge and Hurst 2007; Kittinger et al. 2009), and employee engagement and job involvement (Shorbaji et al. 2011; Yan and Su 2013).

According to the findings of meta-analytic studies (Colquitt et al. 2007; Dirks and Ferrin 2002) it is accepted that employee outcomes such as job satisfaction and organisational citizenship behaviour (OCB) are associated with trust at the individual level, while organisational commitment is related to organisational trust (Cook and Wall 1980; DeConinck 2010). Furthermore, organisational trust has been demonstrated to be an important predictor of OCB (Van Dyne et al. 2000), employee motivation, organisational commitment and work engagement (Katou 2013), and an increased level of trust in the organisation improves employee outcomes (Croppanzano et al. 2002; Restubog et al. 2009). On the basis of the above, we hypothesise that:

**H4(a):** A positive direct relationship exists between CSE and work engagement.

**H4(b):** A positive direct relationship exists between organisational trust and work engagement.

### 1.5. The operational model

Putting it all together, Figure 1 presents an operational model that includes the antecedents and the consequences of voice and silence, reflecting the hypotheses developed in the preceding sections. By integrating these hypotheses we end up with the following hypotheses:

**H5(a):** Employee pro-social voice partially mediates the relationship between CSE and work engagement.

**H5(b):** Employee defensive silence partially mediates the relationship between CSE and work engagement.

**H5(c):** Employee pro-social voice partially mediates the relationship between organisational trust and work engagement.

**H5(d):** Employee defensive silence partially mediates the relationship between organisational trust and work engagement.
2. Methods

Context

Data for this research was collected in October-December 2016 by means of a questionnaire which was distributed to the employees of public and private organisations in the manufacturing, services and trade sectors, covering the whole of Greece. Greece is a peripheral country in the European Union that has been heavily affected by the 2008 economic and financial crisis, and is still under the supervision of the “Three Institutions” (i.e. the European Commission, the International Monetary Fund, and the European Central Bank) in attempts to improve the competitiveness of the economy. In this bleak scenario, many Greek firms are trying to avoid closure and employees are struggling to stay in employment. Therefore, it would be interesting to study the mediating mechanism of employee pro-social voice and defensive silence in the relationship between CSE and organisational trust, and employee work engagement.

Sample

The questionnaires were administered by 100 individuals pursuing management degrees at a Greek business school. The survey instrument was distributed to 300 organisations with more than 10 employees. To increase the reliability of measures, and considering that Greek organisations are rather small, we asked the individuals administering questionnaires to concentrate on two respondents from each firm at senior management level, two respondents at middle management level and four respondents at other levels (Gerhart et al. 2000). According to this protocol, a total of 2400 questionnaires were distributed, thus ensuring low sampling error and selection bias due to the large sample size employed. A total of 1178 adequately completed questionnaires were returned from employees in 139 organisations, a response rate of 46.3 percent at the organisation level, and 49.1 percent at the employee level.

Of the sample of 139 organisations, 43.2 percent had up to 50 employees, 33.1 percent had 21 to 100 employees, and 23.7 percent had more than 101 employees; 22.3 percent were from the manufacturing sector, 48.2 percent were from the services sector, and 29.5 percent were from
the trade sector. Of the sample of 1178 respondents, 49.7 percent were male and 50.3 percent were female; 58.5 percent had a university degree; 84.1 percent were full-time and 15.9 percent part-time. The average age of respondents was 40.22 (± 10.33) years old, and their average seniority was 11.27 (± 8.54) years. Finally, 15.4 percent of the respondents were senior managers, 19.5 percent were middle managers, and 65.0 percent belonged to neither category.

Measures

Most measures were directly taken from the research cited. Unless indicated, we used a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The structure of the constructs developed and their properties are shown in Table 1. Specifically:

<table>
<thead>
<tr>
<th>Table 1. Constructs and their properties</th>
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<tr>
<td><strong>Constructs</strong></td>
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<tr>
<td>----------------</td>
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<tr>
<td>Core Self-Evaluation</td>
</tr>
<tr>
<td>1. Self-efficacy</td>
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<td>2. Self-esteem</td>
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<td>3. Emotional stability</td>
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<td>4. Locus of control</td>
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<tr>
<td>Organisational Trust</td>
</tr>
<tr>
<td>1. Integrity</td>
</tr>
<tr>
<td>2. Competence</td>
</tr>
<tr>
<td>3. Dependability</td>
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<tr>
<td>Employee Pro-social Voice</td>
</tr>
<tr>
<td>Employee Defensive Silence</td>
</tr>
<tr>
<td>Work Engagement</td>
</tr>
<tr>
<td>1. Vigour</td>
</tr>
<tr>
<td>2. Dedication</td>
</tr>
<tr>
<td>3. Absorption</td>
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</table>

* All Bartlett’s significances are equal to 0.000

Source: Own elaboration.

Core self-evaluation

This construct comprised of 12 items was developed by Judge et al. (2003) and consists of four sub-scales - self-efficacy, self-esteem, emotional stability, and locus of control. Example items are: “I complete tasks successfully”, “Overall, I am satisfied with myself”, “I never feel depressed”, and “I always feel in control of my work”.

Organisational trust

This construct comprised of 11 items was developed by Paine (2003) and consists of three subscales – integrity, competence, and dependability. Example items include: “This organisation treats people like me fairly and justly”, “I feel very confident about the organisation’s skills”, and “This organisation can be relied on to keep its promises.”
Employee pro-social voice
This construct comprised of 5 items was developed by Van Dyne et al. (2003). Example items include: “I express solutions to problems with the cooperative motive of benefiting the organisation” and “I develop and make recommendations concerning issues that affect the organisation”.

Employee defensive silence
This construct comprised of 5 items was developed by Van Dyne et al. (2003). Example items include: “I do not speak up and suggest ideas for change, based on fear”, and “I withhold relevant information due to fear”.

Work engagement
This construct comprised of 17 items was developed by Schaufeli et al. (2002) and has three sub-scales – vigour, dedication, and absorption. Example items include: “When I get up in the morning, I feel like going to work”, “My job is challenging”, and “When I am working, I forget everything else around me”.

Controls
To avoid alternative explanations of the findings, we used the following controls (Turnley and Feldman 2000): Personal demographic variables: gender (1 = male, 2 = female), age (1 = up to 30, 2 = 31-50, 3 = more than 50 years old), education (1 = basic, 2 = high school / lyceum, 3 = university); employment variables: seniority (1 = up to 5, 2 = 6-12, 3 = more than 12 years with the company), tenure (1 = full-time, 2 = part-time, position (1 = senior management, 2 = middle manager, 3 = other); organisational variables: sector (1 = manufacturing, 2 = services, trade), owner (public, private); size (1 = up to 50, 2 = 51 – 100, more than 100 employees).

Common method bias
To minimise self-biased response error, we drew on the recommendations of Podsakoff et al. (2003), Lindell and Whiney (2001) and Aaker et al. (2007). First, we made every effort to ensure that the participants were convinced of the anonymity of their responses. Second, we designed a well-structured questionnaire, we carefully ordered the questions in the survey, and we avoided ambiguous phrases. Third, we asked multiple respondents from each organisation to answer the questions from the questionnaire. Fourth, we also noted very clearly that all data would be combined for analytical purposes and that individual responses would never be analysed or discussed. Further, taking into consideration that some correlation coefficients were rather high, Harman’s (1967) single factor test was also used to examine the likelihood of common method bias threat. The model exhibited very poor fit (Chi-squared = 8501.735, df = 161, p = 0.000, Normed Chi-squared = 52.806, RMR = 0.161, GFI = 0.546, NFI = 0.515, CFI = 0.519, RMSEA = 0.210), which provided a good indication that a single factor did not account for the majority of variance in our data.

Consistency and validity of the survey instrument
Content validity was established by operationalising broadly accepted and validated items developed in the literature (Straub 1989). Accordingly, we cited all items and scales that constitute the constructs used in the study. Construct internal consistency was investigated by evaluating the computed Cronbach’s alphas. The figures in Table 1 indicate that the survey instrument is reliable for testing the model shown in Figure 1, as all Cronbach’s alphas are much higher than 0.70 (Nunnally 1978). Construct validity was examined by evaluating the percentage of the total variance
explained per dimension, obtained by applying confirmatory factor analysis (CFA) with varimax rotation and the eigenvalue greater than one criterion. The percentage of total variance-explained values reported in Table 1, where all items loaded well on their respective factors (omitted for brevity), are higher than 50.0 percent, indicating acceptable survey instrument construct validity (Hair et al. 2008). Additionally, construct validity was also examined by evaluating the average variance extracted (AVE) per dimension obtained by applying CFA (Smith et al. 1996). The AVE values reported in Table 1 are much higher than 0.50, indicating acceptable survey instrument construct validity (Hair et al. 2008). Furthermore, the Kaiser-Meyer-Olkin (KMO) test, measuring the sampling adequacy, and Bartlett’s test of sphericity, measuring the appropriateness of factor analysis, was used (Field 2005). According to the results presented in Table 1, all KMO values are above 0.50 and all Bartlett’s test significances are below 0.05, indicating that factor analysis is appropriate for this data (Kaiser 1974). Construct composite reliability was assessed by examining the calculated composite reliability scores (Hair et al. 2008). The figures in Table 2 indicate that the degree of construct reliability is acceptable, since reliability scores exceed 0.70 (and the estimated loadings are at least equal to 0.60). Construct discriminant validity was assessed by examining whether the correlation coefficients between pairs of constructs were significantly different from unity (Gefen et al. 2000), and by examining whether the square root of each factor’s AVE is larger than its correlations with other factors (Straub et al. 2004). Table 2 presents the correlation coefficients of all constructs used in the study. We may observe that the correlation coefficients are significantly different from unity, and they are smaller than the square root of each factor’s AVE, thus providing evidence for separate constructs.

Table 2. Means, Standard deviations, Validity indices, and Correlation coefficients of the constructs used in the study

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Means (standard deviations)</th>
<th>Validity indices</th>
<th>Correlation coefficients</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Composite reliability</td>
<td>Average variance explained</td>
</tr>
<tr>
<td>(1) Core self-evaluations</td>
<td>3.90 (0.59)</td>
<td>0.84</td>
<td>0.56</td>
</tr>
<tr>
<td>(2) Organisational trust</td>
<td>3.97 (0.85)</td>
<td>0.92</td>
<td>0.79</td>
</tr>
<tr>
<td>(3) Employee pro-social voice</td>
<td>3.88 (0.83)</td>
<td>0.88</td>
<td>0.60</td>
</tr>
<tr>
<td>(4) Employee defensive silence</td>
<td>1.70 (0.92)</td>
<td>0.95</td>
<td>0.83</td>
</tr>
<tr>
<td>(5) Work engagement</td>
<td>3.85 (0.78)</td>
<td>0.91</td>
<td>0.60</td>
</tr>
</tbody>
</table>

p < 0.01

Source: Own elaboration.
Statistical analysis

To test the hypotheses, the methodology of structural equation models (SEM) was used via AMOS. SEM is effective when testing models that are path-analytic with mediating variables, and include latent constructs that are being measured with multiple items (Byrne, 2010). We assessed the overall model fit following Bollen’s (1989) recommendation to examine multiple indices, since it is possible for a model to be adequate on one fit index but inadequate on many others. We used the chi-square test and the normed-chi-square ratio, the goodness of fit index (GFI), the normed fit index (NFI), the comparative fit index (CFI), the root mean squared residual (RMR), and the root mean squared error of approximation (RMSEA) (for details see Hair et al. 2008).

3. Results

The measurement model

Before testing the hypotheses, a series of CFAs were performed to ensure construct validity. First, the hypothesised model was tested, referring to the five constructs. Analyses showed an acceptable fit for the hypothesised structure (Chi-squared = 689.195, df = 151, p = 0.000, Normed Chi-squared = 4.564, RMR = 0.031, GFI = 0.943, NFI = 0.961, CFI = 0.969, RMSEA = 0.055). Next, we compared the fit of the proposed measurement model to an alternative, less restrictive, model with all items loaded on a single factor. This model was found to fit worse than the hypothesised model (see the results reported above with respect to Harman’s test). We further compared the proposed measurement model with alternative models with restrictions ranging between the proposed five factor model and the single factor model. The fit values of these alternative models ranged between the two extreme models, supporting the proposed factor structure of the constructs used in this study as well as their discriminant validity (Anand et al. 2010).

Structural model

Table 2 displays the means, standard deviations, validity indices, and correlation coefficients of the constructs used in the study. We observe significant correlations between all structural constructs, supporting the hypotheses of the study. However, results based on correlations, although interesting, may be misleading due to the interactions between several variables. Therefore, in order to isolate the possible links between the variables involved in the operational model presented in Figure 1, the estimated path diagram for this proposed framework is presented in Figure 2. The arrows indicate the structural relationships between the corresponding variables. The curved two-way arrows represent correlations between pairs of associated errors of variables. The numbers that are assigned to each arrow show the estimated significant standardised coefficients and the numbers in parentheses show the loadings of the dimensions within each construct. All coefficients are significant at level 0.01, except those specially indicated in Figure 2. The goodness-of-fit indexes are as follows: Chi-Square = 1279.524, df = 304, p = 0.000, Normed Chi-Square = 4.209, RMR = 0.033, GFI = 0.924, NFI = 0.930, CFI = 0.946, RMSEA = 0.052. It must be noted here that although the chi-square statistic is significant and inflated due to the very high sample size, taking into consideration the fact that all the reported standardised coefficients are significant, and all the remaining goodness-of-fit indexes are highly acceptable, we accept that the validity of the model is satisfactory.
Testing the hypotheses

From the results presented in Figure 2 we see that CSE positively predicts employee pro-social voice, and negatively predicts defensive silence, supporting hypothesis H1(a) and H1(b) respectively. Similarly, organisational trust positively predicts employee pro-social voice, and negatively predicts defensive silence, supporting hypothesis H2(a) and H2(b) respectively.

Additionally, from the results presented in Figure 2 we see that employee pro-social voice positively predicts work engagement, and employee defensive silence negatively predicts work engagement, supporting hypothesis H3(a) and H3(b) respectively. Moreover, CES and organisational trust directly and positively predict work engagement, supporting hypothesis H4(a) and H4(b) respectively.

These findings document that employee pro-social voice and defensive silence partially mediate in the relationship between CSE and work engagement, supporting hypothesis H5(a) and H5(b) respectively. Similarly, employee pro-social voice and defensive silence partially mediate in the relationship between organisational trust and work engagement, supporting hypothesis H5(c) and H5(d) respectively. Furthermore, one-tailed Sobel (1982) tests have been performed to assess the significance of the proposed mediating mechanisms. In particular, the Sobel tests with respect to H5(a) \[ z=6.03, p=0.000 \], H5(b) \[ 1.78, p=0.041 \], H5(c) \[ z=6.08, p=0.000 \] and H5(d) \[ z=1.63, p=0.053 \] have verified the partial nature of all the mediating mechanisms.

Combining these results, the total standardised influence of CSE on work engagement is equal to 0.31, which is distinguished between direct (0.23) and indirect influence (0.08). Similarly, the total standardised influence of organisational trust on work engagement is equal to 0.45, which is divided between direct (0.37) and indirect influence (0.08). In simple terms, we may say that although the indirect influence of CSE on
work engagement through employee pro-social voice and defensive silence is approximately equal to that of organisational trust, the total influence of organisational trust on work engagement is approximately one-and-a-half times greater than that of CSE. Moreover, we may say that 25.8 percent of the impact of CSE on work engagement and 17.8 percent of the impact of organisational trust on work engagement is attributable to voice and silence.

Finally, in terms of the controls used in the study, the only significant results derived are those presented in Figure 2. In terms of organisational controls, we see that work engagement is influenced mostly in the trade and services sectors compared to the manufacturing sector, in private rather than public organisations, and in larger rather than smaller organisations. With respect to personal controls, we see that CSE decreases for females, employee pro-social voice increases with higher levels of education, whilst employee defensive silence decreases with higher levels of education. Lastly, considering the individual employment controls, we see that employees in lower-level positions and part-time employees demonstrate lower pro-social voice.

4. Discussion

Theoretical contributions

This study adds to our knowledge of pro-social voice and defensive silence by testing the antecedents and consequences of these constructs during difficult economic times. Considering that this literature area is generally dominated by conceptual non-empirical papers (Schlosser and Zolin 2012), the current study provides valuable empirical insights. The major contributions of the study are as follows:

Firstly, responding to calls for further research that looks at the effects of employee voice and silence in different contexts (e.g. Morrison 2014), we have tested our hypotheses in the context of Greece, which is experiencing a severe economic and financial crisis with high levels of unemployment. We found, using total standardised impacts, that in pro-social voice – traced in proactive employee behaviour and other-oriented motives (Van Dyne et al. 2003) – contributing ideas for new projects increases levels of work engagement; and that in defensive silence - traced in proactive employee behaviour and self-protection motives (Van Dyne et al. 2003) – failing to suggest ideas for change decreases levels of work engagement. Moreover, we see that the impact of voice and silence is highest for vigour and dedication. We consider this finding to constitute a major contribution of the study since it indicates the dimensions of voice and silence that have the most impact on work engagement dimensions.

Second, although researchers have empirically investigated the influence of the FFM of personality on voice or silence in the Greek context (e.g. Nikolaou et al. 2008; Vakola and Bouradas 2005), to the best of our knowledge, there is no empirical research from Greece supporting the notion that CSE constitutes a good predictor of employee voice or silence. Additionally, considering that it has been documented that the non-FFM dispositional constructs more strongly influence voice behaviour than the FFM personality constructs (Crant et al. 2011), our testing whether CSE is an antecedent of employee pro-social voice and defensive silence, in the highly turbulent Greek context, contributes to the relevant knowledge. In particular, self-esteem and locus of control constitute the CSE dimensions that influence voice and silence the most.

Third, although in empirical research organisational trust has been generally used as a predictor of employee voice or silence (Dedahanov and Rhee 2015; Detert and Burris 2007), this research is limited in the
Greek context (e.g. Vakola and Bouradas 2005). Thus, by treating organisational trust as an antecedent of employee pro-social voice and defensive silence, in the context of Greece, this study contributes to the relevant knowledge. In particular, dependability and competence constitute the organisational trust dimensions that influence voice and silence the most.

Fourth, although we can find the fragmented use of CSE and organisational trust in the prediction of employee outcomes in the literature, to the best of our knowledge, there are no studies that investigate the simultaneous impact of CSE and organisational trust on work engagement through the mediating mechanism of employee pro-social voice and defensive silence. Accordingly, we believe that our research framework minimises the creation of possible erroneous findings, by correctly specifying the operational model used, thus contributing to the relevant knowledge.

Practical implications

The general message of this research is that CSE (primarily self-esteem and locus of control) and organisational trust (mainly dependability and competence) influence work engagement (mostly vigour and dedication), through the mediating mechanism of employee pro-social voice (predominantly by contributing ideas for new projects) and employee defensive silence (for the most part by not submitting ideas for change). Additionally, this research documented that the impact of employee pro-social voice is five times greater (in absolute figures) than that of employee defensive silence, more employee pro-social voice and less employee defensive silence has a positive impact on work engagement, and the total impact of organisational trust on work engagement is approximately one-and-a-half times greater than the impact of CSE. Based on these messages, there are many different actions that managers can take to improve organisational performance.

First, in periods of economic crisis such as those currently prevailing in Greece, organisations may focus more on employees that have high confidence in, and satisfaction with, themselves, and on those employees who feel that they are in control of and responsible for what happens to them, in order to encourage and facilitate a better upward input from them, which in turn will make a positive difference to the organisation (Morrison 2014). Therefore, it is important for the organisation to build an open communication system for accurate information and feedback referring to new employee ideas for dealing with new projects and substantial changes that will supplement decision-making (Nikolaou et al. 2011).

Second, organisations should promote a climate of trust where employees may feel that it is safe and not risky to offer up their ideas and opinions about negative things that may happen in the organisation (Vakola and Bouradas 2005). However, a prerequisite for this action is to develop an efficient and honest communication system.

Third, besides developing a climate of trust in the organisation, managers should strengthen dispositions of employee personality in order to engage employees in more pro-social and less defensive behaviour (Morrison 2014).

Fourth, it is an open secret that everyone prefers to hear positive things rather than negative. More specifically, in periods of economic crisis where unemployment is high, employees who are afraid that they may lose their job and that it would be very difficult afterwards to find a new job make use of flattery in informing on positive rather than negative events. As a result, organisations which are poorly or wrongly informed may lose many opportunities to correct
badly executed activities. Therefore, organisations should establish a means by which all employees have the psychological feeling that it is better for them and the organisation if they communicate relevant ideas and information accurately and in a timely fashion (Vakola and Bouradas 2005).

**Limitations and future research**

The findings above should be treated with caution because the study has certain limitations. First, all variables were self-reported, giving rise to concerns about common method bias. Although data was collected using multiple respondents and actors per organisation, this does not necessarily completely eliminate this source of bias. To minimise possible common method bias concerns, data should be gathered from independent sources. Second, the data was collected using a questionnaire at a single point in time. As a result, the study does not allow for the appropriate investigation of dynamic causal inferences. The field would greatly benefit from time-series or longitudinal studies in the future. Third, the study was applied in the context of small firms operating in Greece, which are currently undergoing a severe financial and economic crisis, and thus the findings from the Greek sample may not generalise across borders. Future research should consider other contexts such as different countries that may face similar financial and economic crises.

**Conclusions**

Despite the limitations, this study provided a theoretical and empirical test of the underlying assumptions in the organisational behaviour literature, documenting the fact that employee pro-social voice has a high and positive impact on work engagement and employee defensive silence has a low and negative impact. Aside from the role of pro-social voice and defensive silence in influencing work engagement, we further found that both the personality of employees and organisational trust had a strong and significant effect on work engagement. We concluded that, although the impact of personality on work engagement through employee pro-social voice and defensive silence is approximately equal to that of organisational trust, the overall impact of organisational trust on work engagement is much stronger compared to that of personality. However, we should emphasise that the findings of this study should be considered within organisations operating during periods of financial and economic crisis.

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