

Investigating the mediating effect of perceived organisational support on the relationship between authentic leadership and work engagement.

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A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

I, Theresa Vermeulen, hereby declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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Theresa Vermeulen

7 November 2016

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## 1. Letter from Supervisor

Caren Scheepers <scsheepers@gibs.co.za>  
To: Theresa Vermeulen <vermeulentv@gmail.com>, Jennifer Theodoridis <Theodoridis.J@gibs.co.za>

6 November 2016 at 14:15

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Dear Theresa and Jennifer

With regards to the article on an MBA study:

As Theresa Vermeulen's supervisor, I am of the opinion that there is a reasonable chance of this article being accepted for review by the identified journal in terms of the quality and degree of contribution.

As co-author I further commit that the article will be submitted to the journal by 31 March 2017 and the feedback attended to, to see it through for submission.

Both the author and co-author of this article will be acknowledged and cite our affiliation with GIBS.

Regards

Caren

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The Journal of Leadership and Organisational Studies (JLOS) is a quarterly journal with the objective to enhance knowledge on practice of leadership. The article and study that has the aim of being published falls within this category and intends to contribute to theory on leadership and organisational practise.

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## **2.4 Sequence of authorship**

The standard sequence of authorship will be followed where the student is the first author and the supervisor the second author.

### 3. Journal Requirements

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JLOS deals with all aspects of leadership and organisations. The JLOS's intent is to serve as a forum for the expression of theory, research and practice, with special emphasis given to emerging ideas, issues, trends, and innovations. An issue that deals with leadership and/or the functioning of organisations is appropriate for JLOS. Final versions of papers submitted for publication will follow the style of the American Psychological Association.

Manuscripts submitted for publication consideration should be typed on a standard size paper (8.5 by 11) and should be double-spaced throughout. These manuscripts should include a title page that includes the title of the article and appropriate contact information for the author. The second page should repeat the title of the article and include a brief (not to exceed 100 words) abstract. We recognize and understand that sometimes length of the article does not reflect value or content. There is, therefore, no minimum length. However, complete manuscripts (including references) normally should not exceed 25-30 pages in length.

Manuscripts should be prepared using the *APA Style Guide* (Sixth Edition). All pages must be typed, double-spaced (including references, footnotes, and endnotes). Text must be in 12-point Times Roman. Block quotes may be single-spaced. Must include margins of 1inch on all the four sides and number all pages sequentially.

Sections in a manuscript may include the following (in this order): (1) Title page, (2) Abstract, (3) Keywords, (4) Text, (5) Notes, (6) References, (7) Tables, (8) Figures, and (9) Appendices.

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Please include the following:

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- Each author's complete name and institutional affiliation(s)
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Print the abstract (150 to 250 words) on a separate page headed by the full article title. Omit author(s)'s names.

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Headings and subheadings. Subheadings should indicate the organisation of the content of the manuscript. Generally, three heading levels are sufficient to organize text. Level 1 heading should be Centred, Boldface, Upper & Lowercase, Level 2 heading should be Flush Left, Boldface, Upper & Lowercase, Level 3 heading should be Indented, boldface, lowercase paragraph heading that ends with a period, Level 4 heading should be Indented, boldface, italicized, lowercase paragraph heading that ends with a period, and Level 5 heading should be Indented, italicized, lowercase paragraph heading that ends with a period.

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- Capitalize only the first word of the title and of the subtitle, if there are one, and any proper names – i.e. only those words that are normally capitalized.
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- Every citation in text must have the detailed reference in the Reference section.
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### 3.2 Example of recent published article

Article

## The Destructiveness of Laissez-Faire Leadership Behavior: The Mediating Role of Economic Leader–Member Exchange Relationships

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Robert Buch<sup>1</sup>, Øyvind L. Martinsen<sup>1</sup>, and Bård Kuvaas<sup>1</sup>

#### Abstract

This study examined the mediating role of economic leader–member exchange (ELMX) on the negative associations between laissez-faire leadership and affective commitment, self-reported work effort, and self-reported organizational citizenship behavior. Two samples were used. Study 1 consisted of 199 employees from an international high-technology manufacturing organization. Study 2 consisted of 197 employees from an international private security firm. Both studies supported a positive association between laissez-faire leadership and an ELMX relationship. Study 1 showed that ELMX fully mediated the negative association between laissez-faire leadership and affective commitment. Study 2 showed that ELMX fully mediated the negative association between laissez-faire leadership and self-reported work effort and partially mediated the negative association between laissez-faire leadership and self-reported organizational citizenship behavior. Theoretical and practical implications are discussed.

#### Keywords

laissez-faire leadership, economic leader–member exchange relationships

#### Introduction

Whereas constructive leadership behaviors, such as transformational and transactional leadership, have been the primary focus of leadership research (cf. Hiller, DeChurch, Murase, & Doty, 2011; Schyns & Schilling, 2012), destructive leadership behaviors have received less attention (Skogstad, Einarsen, Torsheim, Aasland, & Heitland, 2007). Still, destructive leadership is highly prevalent in contemporary working life (Aasland, Skogstad, Notelaers, Nielsen, & Einarsen, 2010; J. Hogan, Hogan, & Kaiser, 2011; R. Hogan, 2007; Schat, Frone, & Kelloway, 2006) and may have devastating consequences for both employees and organizations (Skogstad et al., 2007) as reflected in, for example, attitudinal and counterproductive work outcomes (Schyns & Schilling, 2012).

Beyond mainstream conceptualizations of destructive leadership (Krasikova, Green, & LeBreton, 2013; Schyns & Schilling, 2012; Tepper, 2007), Skogstad et al. (2007) recently obtained support for the proposition that laissez-faire leadership—which is not only a lack of leadership but also implies not meeting the subordinates' legitimate expectations—may also represent destructive-leadership behavior that relates positively to role ambiguity, role conflict, conflicts with coworkers, and bullying at work. In addition, laissez-faire leadership seems associated with personality

traits that typically are not associated with effective leadership (Derue, Nahrgang, Wellman, & Humphrey, 2011). Further supporting the lack of basic leadership competence, other studies have shown that laissez-faire leadership behavior relates negatively to subordinates' job satisfaction (Judge & Piccolo, 2004), leader effectiveness, satisfaction with the leader, and affective commitment toward the organization (Bačiniienė & Škudienė, 2008; Judge & Piccolo, 2004; Yammarino, Spangler, & Bass, 1993). In fact, research reviewed by Bass (2008) shows that laissez-faire leadership has negative correlations with effectiveness outcomes across different situations, across different leaders, and for outcomes with both hard and soft data.

The mechanisms through which laissez-faire leadership negatively influences constructive employee outcomes, however, have received less attention, as most empirical research has focused on the direct relationships between laissez-faire leadership and employee outcomes (Bass, 2008). In the present study, we propose that an economic

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leader-member exchange (ELMX) relationship mediates the relationship between laissez-faire leadership and employee outcomes. Leader-member exchange (LMX) scholars have conceptualized LMX as falling on a continuum from low-quality exchange relationships to high-quality exchange relationships. Based on social-exchange theory, however, social and economic exchange relationships represent qualitatively different relationships rather than relationships of different quality (Blau, 1964; Shore, Tetrick, Lynch, & Barksdale, 2006). In accordance with such a conceptualization, Kuvaas, Buch, Dysvik, and Haerem (2012) recently obtained support for the proposition that ELMX and social leader-member exchange (SLMX) relationships represent two different forms of relationships between a leader and subordinate.

Kuvaas, Buch, Dysvik, et al. (2012) argued that an SLMX relationship is characterized by what has been referred to as a high-quality LMX, that is, ongoing exchanges less in need of an immediate "pay off" because they are based on a diffuse future obligation to reciprocate. An ELMX relationship, however, has a more contractual character and does not imply long-term diffuse obligations. For instance, while each party expects some future return in both SLMX and ELMX relationships, the form and timing of the repayment is made clearer in ELMX relationships, so that the trust required is less tied to the relationship itself (Buch, Kuvaas, Dysvik, & Schyns, 2014). As stated by Blau (1994), an economic exchange relationship "specifies the precise nature of the obligations of both parties and when any outstanding debts are due" (p. 155). An ELMX relationship is therefore more impersonal and rests on formal status differences and calculus-based trust (Scandara & Pellegrini, 2008). Such an LMX relationship is experienced as more short-term, and motivated by immediate self-interest (Buch et al., 2014; Kuvaas, Buch, Dysvik, et al., 2012). In the present study, we argue that laissez-faire leadership is likely to encourage subordinate perceptions of a more impersonal, contractual ELMX relationship (Kuvaas, Buch, Dysvik, et al., 2012), which, in turn, reduces subordinates' affective commitment toward the organization, their work effort, and organizational citizenship behavior (OCB), or their willingness to "go beyond that which is required" (Organ, 1990, p. 43). For leaders lacking necessary leadership competence, but who still are in a formal leadership position, ELMX may represent an instrumental and pseudo-leadership solution to their leadership responsibilities.

Our intended contribution is twofold. According to Howell and Hall-Merenda (1999), leadership research implicitly assumes that the nature of the relationship between a leader and a subordinate is essential to the link between a leader's behavior and a subordinate's response. In line with this, Wang, Law, Hackett, Wang, and Chen (2005) found that a high-quality LMX relationship mediated the link between transformational leadership behavior

and subordinates' organizational citizenship behaviors and work performance. Accordingly, in responding to calls for research integrating the transformational leadership and LMX literatures (Gerstner & Day, 1997; Graen & Uhl-Bien, 1995; Howell & Hall-Merenda, 1999), we intend to contribute to research on laissez-faire (destructive) leadership by providing an explanation for the negative relationships between laissez-faire and affective organizational commitment, work effort, and OCB. Second, Kuvaas, Buch, Dysvik, et al. (2012) found that an ELMX relationship negatively related to subordinates' work performance and organizational citizenship behaviors. Such findings call for more research on potential antecedents to an ELMX relationship. Accordingly, by investigating laissez-faire as an antecedent to ELMX, we aim to contribute to the extant LMX literature with a better understanding of the factors that shape an ELMX relationship.

## Theory and Hypotheses

### *Laissez-Faire Leadership and ELMX Relationships*

Leader-member exchange is a well-established construct with respect to the nature of the relationship between a leader and a subordinate (Graen & Uhl-Bien, 1995). Initially, Graen and colleagues (Dansereau, Cashman, & Graen, 1973; Dansereau, Graen, & Haga, 1975; Liden & Graen, 1980) founded LMX theory on the premise that leaders develop relationships of varying quality with individual subordinates. These leader-subordinate relationships, or LMX relationships, were assumed to fall on a continuum from low-quality economic exchange relationships to high-quality social exchange relationships (e.g., Bernerth & Walker, 2009; Walumbwa, Cropanzano, & Goldman, 2011; Wayne et al., 2009). However, because social- and economic-exchange relationships represent qualitatively different relationships (Blau, 1964; Shore et al., 2006), Kuvaas, Buch, Dysvik, et al. (2012) recently argued and obtained support for the proposition that a single continuum may not be warranted. Theoretically, an SLMX relationship should be more encompassing and involve the exchange of socioemotional resources such as support and be based on trust, mutual liking, and respect (Bernerth, Armenakis, Feild, Giles, & Walker, 2007; Liden & Graen, 1980). An ELMX relationship, on the other hand, should involve little more than economic exchanges that rest on discrete agreements, formal status differences, and downward influence (Buch et al., 2014). The emphasis in such relationships is on the balance between what one gives and gets from the relationship (Kuvaas, Buch, Dysvik, et al., 2012). Employees in ELMX relationships can go beyond the call of duty, but not unless they know exactly what to get in return within a relatively short period of time (Kuvaas,

Buch, Dysvik, et al., 2012). While SLMX relationships should involve relationship-based trust (see Lau & Cobb, 2010), ELMX relationships should be limited to calculus-based trust emerging “from a focused and systematic cognitive evaluation of the other party’s likelihood of completing a transaction” (Lau & Cobb, 2010, p. 901). Kuvaas, Buch, Dysvik, et al. (2012) argued that ELMX relationships negatively relate to in-role and extra-role performance, as employees in such relationships withhold effort because they worry about their self-interest and future returns.

Experiencing laissez-faire leadership by one’s immediate supervisor is clearly compatible with descriptions of ELMX as involving little more than what is stipulated in the employment contract (Kuvaas, Buch, Dysvik, et al., 2012). Still, ELMX is not merely laissez-faire leadership as it takes a *relationship-based* approach to investigating the leader-member dyad, as opposed to investigating laissez-faire leadership *behaviors*. Specifically, laissez-faire leadership is typically conceived as an inactive leadership style in which leaders have no confidence in their own ability to supervise and instead bury themselves in paperwork and actively seek to avoid subordinates (Bass, 2008). Laissez-faire leadership is characterized by delayed decisions, lack of involvement and feedback, and no attempts to satisfy the needs of the subordinates or motivate them (Bass & Avolio, 1990). Rather, the laissez-faire leadership style involves leaving the subordinates with too much responsibility, diverting attention from hard choices, and abdicating responsibility (Bass, 2008). Furthermore, Bass (2008) argues that laissez-faire leaders “refuse to take sides in a dispute, are disorganized in dealing with priorities, and talk about getting down to work, but never really do” (p. 143). These characteristics of laissez-faire leadership should make the subordinates feel ignored and isolated (Loi, Mao, & Ngo, 2009), and thus more likely to focus on the economic exchange aspects of their relationship with their immediate supervisor. That is, they should be more likely to worry more about the balance between what they give and get from the relationship with their supervisor, and more likely to pursue quid pro quo economic exchanges with their supervisor as a preemptive strategy to protect their self-interest. In addition, ELMX can be viewed as simple instrumental form of leadership where reward is used as a tool instead of relying on relationship-oriented behaviors, such as recognizing, supporting, delegating, and consulting (Yukl, O’Donnell, & Taber, 2009). Because laissez-faire leaders may lack the personality traits that are typically associated with effective leadership (Derue et al., 2011), the development of ELMX relationships may represent a viable means for supervisors to deal with their subordinates, as they are unable to lead. After all, most HR and management systems are organized in a way that makes total absence of management impossible. For instance, appraisals must be performed, regular meetings must be held, and so forth.

Accordingly, laissez-faire leaders should be more likely to develop ELMX relationships with their subordinates. We therefore hypothesize:

**Hypothesis 1:** There is a positive relationship between laissez-faire leadership behavior and an ELMX relationship.

### *The Mediating Role of an ELMX Relationship*

Because decisions are often delayed, and involvement and attempts to satisfy the needs of the subordinates are absent, laissez-faire leadership “implies not meeting the legitimate expectations of the subordinates” (Skogstad et al., 2007, p. 81). Not meeting the legitimate expectations of subordinates is likely to make them uncertain about the supervisor’s obligations in the long run, and as a result enable subordinates’ experience of an ELMX relationship in which they focus on more short-term, quid pro quo exchange of benefits (cf. Wong, Wong, Ngo, & Lui, 2005). In turn, experiencing a more instrumental economic-exchange relationship with one’s supervisor (i.e., ELMX), in which the emphasis is on formal and contractual obligations, and needs and preferences of the subordinates are not considered (Shore, Bommer, Rao, & Seo, 2009) should serve to undermine subordinates’ affective commitment, work effort, and discretionary behaviors (OCBs) directed toward the organization. After all, subordinates are probably motivated to determine the organization’s “readiness to reward increased work effort and to meet needs for praise and approval” (Eisenberger, Huntington, Hutchison, & Sowa, 1986, p. 501), and the ELMX relationship may be considered as a lens through which the subordinates view their entire work experience (Gerstner & Day, 1997). Accordingly, we expect that laissez-faire leadership will negatively relate to affective commitment, work effort, and OCB via the impersonal, contingent, transactional, and short-term nature of an ELMX relationship:

**Hypothesis 2:** The negative relationships between laissez-faire leadership and subordinates’ (a) affective organizational commitment, (b) work effort, and (c) OCB is mediated by subordinate perceptions of an ELMX relationship.

## **Method**

### *Sample and Procedure*

We performed two studies to test the hypotheses. In both studies, we administered two surveys with a 1-month time interval to reduce the potential influence of common-method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The first waves of data collection included the

control variables, measures of laissez-faire leadership, and ELMX, whereas the second waves of data collection included measures of affective commitment toward the organization (Study 1) and work effort and OCB (Study 2). For Study 1, we surveyed employees from an international high-technology manufacturing organization. In Study 2, we surveyed employees from an international private security firm. Both organizations were located in Norway. The samples were confined to participants who responded to both waves of data collection, arriving at final samples of  $N = 199$  (Study 1), and  $N = 197$  (Study 2). The overall response rate was 19.3%. In Study 1, 69% were men, 8% were temporary employees, and 14% had managerial responsibilities. The average age was 43 years, and average dyad tenure was 1.7 years. In Study 2, 70% were men, 100% were employed on a permanent basis, and 17% had managerial responsibilities. The average age was 36 years, and average dyad tenure was 2.5 years.

### Measures

**Laissez-Faire Leadership.** In both studies, we measured laissez-faire leadership by means of four items from Bass and Avolio's (2000) MLQ Form 5x-Short, albeit adapted to refer to the supervisor (cf. Walumbwa, Wu, & Orwa, 2008). Employees rated the supervisors' laissez-faire leadership behavior on a 5-point scale ranging from 0 (*not at all*) to 4 (*frequently, if not always*). The internal consistency (Cronbach's  $\alpha$ ) of this scale was  $\alpha = .87$  in Study 1 and  $\alpha = .89$  in Study 2.

**ELMX.** Kuvaas, Buch, Dysvik, et al. (2012) recently developed separate measures of ELMX and SLMX. However, some of the more contingent quid pro quo items were excluded from the ELMX scale because they cross-loaded or had weak factor loadings (Kuvaas, Buch, Dysvik, et al., 2012). Accordingly, additional items were developed on the basis of social exchange theory (e.g., Blau, 1964) by Buch, Kuvaas, and Dysvik (2011). In the present study, we use their refined ELMX scale. Sample items include "I watch very carefully what I get from my immediate supervisor, relative to what I contribute" and "In order for me to feel certain that I will receive something in return for a favor, my supervisor and I have to specify the return in advance." The internal consistency of the scale was  $\alpha = .81$  in Study 1 and  $\alpha = .85$  in Study 2.

**Affective Commitment.** Affective commitment ( $\alpha = .89$ ), or the "affective or emotional attachment to the organization such that the strongly committed individual identifies with, is involved in, and enjoys membership in, the organization" (Allen & Meyer, 1990, p. 2), was measured in Study 1 by means of the 6-item scale by Meyer, Allen, and Smith (1993). Sample items include "I would be very happy to

spend the rest of my career with this organization" and "I really feel as if this organization's problems are my own."

**Work Effort.** For Study 2, we measured self-reported work effort ( $\alpha = .89$ ) with a 5-item scale (Dysvik & Kuvaas, 2011) that included items such as "I try to work as hard as possible" and "I usually don't hesitate to put in extra effort when it is needed."

**Organizational Citizenship Behavior.** We measured self-reported OCB ( $\alpha = .88$ ) in Study 2 by the 7-item helping behavior scale of Van Dyne and LePine (1998). Sample items include "I help others in my work group with their work responsibilities" and "I volunteer to do things for my work group."

**Control Variables.** Because ELMX and SLMX are not opposite poles on a single continuum (Kuvaas, Buch, Dysvik, et al., 2012), we controlled for SLMX in both Study 1 ( $\alpha = .91$ ) and Study 2 ( $\alpha = .94$ ) with an 8-item measure (Buch et al., 2011) when investigating the mediating role of ELMX. In both studies we also controlled for gender because research suggests a male preference for quid pro quo exchange relationships (Kuvaas, Buch, & Dysvik, 2012; Kuvaas, Buch, Dysvik, et al., 2012), and we controlled for age since research suggests a systematic relationship between age and affective commitment (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). Furthermore, we controlled for conditions of employment (1 = *temporary employee*, 2 = *standard employee*) and managerial responsibility (1 = *managerial responsibilities*, 2 = *no managerial responsibilities*), because permanent and temporary employees (see, e.g., De Cuyper & De Witte, 2006), and employees with or without managerial responsibilities, may hold different expectations against which they evaluate their employment relationship. Finally, because the duration of the leader-subordinate relationship may have implications for the research findings since it gives the dyad opportunities to interact and communicate (e.g., Zhou & Schriesheim, 2009), we controlled for length of time reporting to the same leader (dyad tenure) in both studies.

### Analyses

We first conducted confirmatory factor analyses (CFA) with the use of the WLSMV estimator of Mplus (Muthén, du Toit, & Spisic, 1997) to test whether the scale items would conform to the a priori hypothesized data structure. To test whether ELMX mediates the relationship between laissez-faire leadership and affective commitment (Study 1), and between laissez-faire leadership and self-reported work effort and OCB (Study 2), we conducted a structural equation modeling (SEM) analysis with the use of the delta-method procedure in Mplus (using the Sobel test). The SEM approach is

**Table 1.** Descriptive Statistics, Correlations, and Scale Reliabilities for Study 1.

	Mean	SD	1	2	3	4	5	6	7
1. Age	42.98	10.10							
2. Gender <sup>a</sup>	1.30	0.46	-.14*						
3. Dyad tenure	1.74	1.57	.21**	-.09					
4. Managerial responsibility <sup>b</sup>	1.83	0.37	-.05	.09	-.22**				
5. SLMX	3.73	0.87	-.08	-.03	.06	-.18**	(.91)		
6. ELMX	1.85	0.64	-.14	-.06	-.09	.21**	-.45**	(.81)	
7. Laissez-faire leadership	2.23	0.91	.25**	.15**	.06	.10	-.63**	.33**	(.87)
8. Affective commitment	3.42	0.77	.13	.03	.12	-.13	.26**	-.34**	-.26** (.83)

Note. *N* = 199. SLMX = social leader-member exchange; ELMX = economic leader-member exchange.

a. Men = 1, women = 2.

b. 1 represents managerial responsibility and 2 represents no managerial responsibility.

\**p* < .05. \*\**p* < .01.

**Table 2.** Descriptive Statistics, Correlations, and Scale Reliabilities for Study 2.

	Mean	SD	1	2	3	4	5	6	7	8	9
1. Age	36.46	13.56									
2. Gender <sup>a</sup>	1.31	0.47	-.07								
3. Dyad tenure	2.54	4.95	-.04	.01							
4. Employment condition <sup>b</sup>	1.08	0.27	.10	-.00	-.04						
5. Managerial responsibility <sup>c</sup>	1.86	0.35	.01	-.01	.02	.07					
6. SLMX	3.25	1.14	-.07	.18*	.13	-.04	-.21**	(.94)			
7. ELMX	2.37	0.84	-.09	-.15*	-.06	.01	.07	-.39**	(.85)		
8. Laissez-faire leadership	2.44	1.04	.29**	.15**	-.06	.04	.12	-.67**	.31**	(.89)	
9. Work effort	4.11	0.77	.17*	.03	.06	-.08	-.13	.24**	-.28**	-.07	(.89)
10. OCB	4.16	0.69	.12	.01	.10	-.03	-.11	.05	-.19**	.07	.60** (.88)

Note. *N* = 197. SLMX = social leader-member exchange; ELMX = economic leader-member exchange; OCB = organizational citizenship behavior.

a. Men = 1, women = 2.

b. Permanent position = 1; temporary employment = 2.

c. 1 represents managerial responsibility and 2 represents no managerial responsibility.

\**p* < .05. \*\**p* < .01.

preferable to the causal-steps approach of Baron and Kenny (1986) because it estimates everything at the same time instead of assuming independent equations (Zhao, Lynch, & Chen, 2010). In addition, the causal-steps approach does not provide a quantification of the indirect effect itself and is among the lowest in power (Fritz & MacKinnon, 2007).

## Results

In Study 1, a four-factor CFA model representing laissez-faire leadership, ELMX, SLMX, and affective commitment achieved a good model fit,  $\chi^2(293) = 493.91, p < .01; \chi^2/df = 1.69$ ; root mean square error of approximation (RMSEA) = .059; comparative fit index (CFI) = .96; Tucker-Lewis index (TLI) = .95, in terms of frequently used rules of thumb (e.g., Hair, Black, Babin, Anderson, & Tatham, 2006). For Study 2, a 5-factor CFA model representing laissez-faire leadership, ELMX, SLMX, work effort, and OCB achieved a similarly good fit,  $\chi^2(454) = 677.30, p < 0.01; \chi^2/df = 1.49$ ;

RMSEA = .05; CFI = .97; TLI = .97. In addition, all factor loadings were statistically significant with a mean standardized loading of .74 (Study 1) and .80 (Study 2), thereby providing support for the convergent validity of the constructs (Anderson & Gerbing, 1988). The scales displayed high internal consistency with reliability estimates ranging from  $\alpha = .81$  to  $\alpha = .94$ . Table 1 and Table 2 report the correlations, means, and standard deviations among the Study 1 and Study 2 variables, respectively. As expected, laissez-faire correlates positively with ELMX in both Study 1 ( $r = .33, p < .01$ ) and Study 2 ( $r = .31, p < .01$ ). Furthermore, ELMX correlates negatively with affective commitment ( $r = -.34, p < .01$ ) in Study 1. However, laissez-faire does not correlate significantly with self-reported work effort ( $r = -.07, ns$ ) or OCB ( $r = .07, ns$ ) in Study 2. We present the results of the structural equation models in Table 3.

The structural-equation models that we estimated for Study 1,  $\chi^2(390) = 702.37, p < .01; \chi^2/df = 1.809$ ; RMSEA = .06; CFI = .94; TLI = .94, and Study 2,  $\chi^2(600) = 914.64$ ,

**Table 3.** The Mediating Role of ELMX on the Relationship Between Laissez-Faire Leadership and Employee Outcomes.

	Study 1			Study 2			OCB	
	ELMX	Affective commitment		ELMX	Work effort		Direct	Indirect
	Direct	Direct	Indirect	Direct	Direct	Indirect		
<b>Control variables</b>								
Age	.14	.10		-.12	.14		.09	
Gender <sup>a</sup>	-.10	.04		-.17 <sup>a</sup>	.01		-.04	
Dyad tenure	-.04	.08		-.07	.05		.10	
Employment condition <sup>b</sup>	N/A	N/A		.01	-.10 <sup>a</sup>		-.02	
Managerial responsibility <sup>c</sup>	.24 <sup>***</sup>	-.06		.06	-.12		-.13	
SLMX		-.02			.47 <sup>***</sup>		.28 <sup>a</sup>	
<b>Independent variable</b>								
Laissez-faire leadership	.59 <sup>***</sup>	-.24	-.15 <sup>a</sup>	.50 <sup>***</sup>	.41	-.17 <sup>***</sup>	.48 <sup>a</sup>	-.19 <sup>***</sup>
<b>Mediating variable</b>								
ELMX		-.26 <sup>a</sup>			-.34 <sup>***</sup>		-.37 <sup>***</sup>	
R <sup>2</sup>	.44		.23	.29		.25		.18

Note. N = 199 (Study 1) and 197 (Study 2). SLMX = social leader-member exchange; ELMX = economic leader-member exchange; OCB = organizational citizenship behavior; RMSEA = root mean square error of approximation; CFI = comparative fit index; TLI = Tucker-Lewis Index. Standardized path coefficients and standardized indirect effects are reported.

Fit indices, Study 1:  $\chi^2(390) = 702.37, p < .01$ ; RMSEA = .06; CFI = .94; TLI = .93.

Fit indices, Study 2:  $\chi^2(600) = 914.64, p < .01$ ; RMSEA = .05; CFI = .96; TLI = .95.

<sup>a</sup> $p < .05$ . <sup>\*\*</sup> $p < .01$ . <sup>\*\*\*</sup> $p < .001$ .

$p < .01$ ;  $\chi^2(df = 1.52)$ ; RMSEA = .05; CFI = .96; TLI = .95, provided a good fit with the data. In support of Hypothesis 1, the results demonstrate a positive relationship between laissez-faire leadership and ELMX in both Study 1 ( $\gamma = .59, p < .01$ ) and Study 2 ( $\gamma = .50, p < .01$ ). Hypothesis 2 contended that the negative relationships between laissez-faire leadership and subordinates' (a) affective organizational commitment, (b) work effort, and (c) OCB is mediated by subordinate perceptions of an ELMX relationship. In support of Hypothesis 2a, the results of Study 1 demonstrate that laissez-faire leadership indirectly negatively relates to affective commitment (standardized effect =  $-.15, p < .01$ ). Specifically, since the direct relationship was not statistically significant ( $-.24, ns$ ), the mediation classifies as indirect-only mediation (Zhao et al., 2010), thus suggesting that ELMX fully mediates the relationship between laissez-faire and affective commitment. Furthermore, the results of Study 2 demonstrate a significant indirect relationship between laissez-faire leadership and self-reported work effort via ELMX (standardized effect =  $-.17, p < .01$ ), and a nonsignificant direct relationship between laissez-faire leadership and self-reported work effort. Accordingly, Hypothesis 2b is supported as well. Finally, in partial support of Hypothesis 2c, the results of Study 2 suggest a significant negative indirect relationship between laissez-faire leadership and self-reported OCB via ELMX (standardized effect =  $-.19, p < .01$ ), and a significant direct positive relationship between laissez-faire leadership and self-reported OCB ( $\gamma = .48, p < .05$ ). Since the indirect relationship has a

different sign than the direct relationship, the form of mediation can be classified as *competitive* (Zhao et al., 2010) or *inconsistent* (MacKinnon, Fairchild, & Fritz, 2007).

## Discussion

By exploring the mediating role of ELMX on the negative relationships between laissez-faire leadership and affective commitment (Study 1), and work effort and OCB (Study 2), the overriding goal of this study was to contribute to a better understanding of why laissez-faire leadership negatively relates to constructive employee outcomes. Our findings hold a number of distinct contributions.

First, our findings show that ELMX fully mediates the relationships between laissez-faire leadership and affective commitment (Study 1) and work effort (Study 2), and partially mediates the relationship between laissez-faire leadership and OCB (Study 2). These findings support previous research suggesting that laissez-faire leadership is not a form of zero leadership, but a form of destructive-leadership behavior (Skogstad et al., 2007). They also support the proposition that although laissez-faire leadership has received less attention than transactional and transformational leadership dimensions, it is just as important (e.g., Hinkin & Schriesheim, 2008). Together, these findings contribute to the extant literature on laissez-faire (destructive) leadership by demonstrating a mechanism through which laissez-faire leadership negatively relates to constructive employee outcomes. In addition, by indicating that ELMX

mediates the influences of destructive (*laissez-faire*) leadership behaviors, we complement and extend research indicating that high-quality (S)LMX mediates the influence of constructive (transformational) leadership behaviors (Wang et al., 2005).

Second, most of the research on LMX relationships has focused on outcomes rather than antecedents (Erdogan & Liden, 2002; Yukl et al., 2009). In both studies, we observed a positive association between *laissez-faire* leadership and ELMX relationships. These observations should contribute to the extant LMX literature by indicating that *laissez-faire* leadership encourages the formation of perceived impersonal, short-term, contractual, formal, ELMX relationships motivated by immediate self-interest (Kuvaas, Buch, Dyssvik, et al., 2012).

Finally, although Study 2 revealed a significant *negative* indirect relationship between *laissez-faire* leadership and OCB via ELMX, it also revealed a significant *positive* direct relationship between *laissez-faire* and OCB. Researchers typically label such phenomenon inconsistent (MacKinnon et al., 2007) or competing (Zhao et al., 2010) mediation, and argue that there are several instances in which the mediated effect may have a different sign in a model than the direct effect. MacKinnon et al. (2007), for instance, use the example of making widgets, where intelligence (*X*) relates to widget production (*Y*) via boredom (*M*). Whereas intelligent workers tend to get bored and produce fewer widgets (indirect negative relationship), intelligent workers also tend to produce more widgets (direct positive relationship). The two relationships are thus competing, and the overall relationship between intelligence and widgets may actually be zero. With respect to the relationship between *laissez-faire* and OCB in particular, our findings suggest that although employees who perceive higher levels of *laissez-faire* leadership may engage in fewer OCBs because they develop perceptions of ELMX relationships, they tend also to engage in more OCBs when their leader leaves them with too much responsibility, diverts attention from hard choices, and abdicates responsibility (i.e., *laissez-faire* leadership; Bass, 2008). The direct and indirect effects are thus competing, and the total relationship between *laissez-faire* leadership and OCB may actually be zero, which is also suggested by the nonsignificant zero-order correlation between *laissez-faire* leadership and OCB ( $r = .07, ns$ ) reported in Table 2.

#### Limitations and Research Directions

As with any study, both studies have a number of potential limitations. First, the cross-lagged nature of the research design means that the causal relationships among the variables should be interpreted with caution (e.g., Shadish, Cook, & Campbell, 2001). Experimental or longitudinal studies may thus be warranted in future research.

Second, the variables in both studies were measured by means of self-report data, which raises concerns about potential common-method variance and percept-percept inflation (e.g., Crampton & Wagner, 1994). We have attempted to deal with these issues in both studies by undertaking several procedural remedies, including temporally and psychologically separating the variables, and ensuring the anonymity of the respondents, which should reduce the threat of common-method variance (Chan, 2009; Podsakoff et al., 2003). The time lag serves to reduce potential common-method variance by “allowing previously recalled information to leave short-term memory” (Podsakoff et al., 2003, p. 888) and by reducing “the respondent’s ability and/or motivation to use previous answers to fill in gaps in what is recalled and/or to infer missing details” (Podsakoff et al., 2003, p. 888). Emphasizing confidentiality should serve to make the respondents’ less likely “to edit their responses to be more socially desirable, lenient, acquiescent, and consistent with how they think the researcher wants them to respond” (Podsakoff et al., 2003, p. 888).

Finally, it is worthwhile to consider the generalizability of our findings. Even though the studies were performed in two relatively different organizations, both studies were conducted in a single country and involved mostly male respondents. Clearly, research is needed in other countries and on other types of employees to determine the generalizability of our mediation model.

Given that the negative relationships between *laissez-faire* leadership and affective commitment and work effort can be explained by the subordinates’ perceptions of ELMX, another avenue for future research is to identify other antecedents to perceived ELMX relationships. In Study 1 and Study 2, we were able to account for 44% and 29% of the variance in ELMX, respectively, suggesting that ELMX relationships are not solely determined by *laissez-faire* leadership. Accordingly, future research may want to investigate the potential roles played by active management by exception and contingent-reward leadership.

#### Practical Implications

On a practical level, our study serves to identify specific types of relations-oriented behavior that managers can aim to avoid or improve to facilitate exchange relationships with individual subordinates. More specifically, our findings suggest that leaders should seek to avoid being absent when needed, make necessary decisions, respond to urgent questions, and get involved when important issues arises. Improving such relations-oriented behaviors is likely to reduce the likelihood that the subordinates experience an ELMX relationship characterized by a focus on more short-term, quid pro quo exchange of benefits, which in turn results in less desirable outcomes such as reduced affective organizational commitment, work effort, and OCB.



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### Note

1. Unfortunately, the students who helped us collect the data only kept track of the overall response rate because of a misunderstanding. Accordingly, we cannot assess whether the response rates differ in the two organizations.

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4. Article

**Investigating the Mediating Effect of Perceived Organisational Support on  
the Relationship between Authentic Leadership and Work Engagement**

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# **Investigating the Mediating Effect of Perceived Organisational Support on the Relationship between Authentic Leadership and Work Engagement**

## **Abstract**

Using positive psychology and the theory of organisational support and reciprocity, we examined whether perceived organisational support (POS) mediates the relationship between authentic leadership and engagement. Authentic leadership and engagement have been investigated extensively however not in relation to POS within the same study. Given the context of the world of work today, there is a need to move beyond the direct association between leadership and engagement to study how other variables may strengthen or weaken this relationship. Data was collected from 202 employees, working in an international information technology organisation and results were analysed at the group level. Regression analysis was used to test for mediation, followed by statistical tests of the indirect effect as well as bootstrapping. Differences between subgroups were also investigated and model fit analysis to establish whether the suggested model was a good fit. The results showed that POS partially mediates the relationship between authentic leadership and engagement. Further practical implications of the findings are discussed, together with limitations and ideas for future research.

# Investigating the Mediating Effect of Perceived Organisational Support on the Relationship between Authentic Leadership and Work Engagement

## Introduction

Across the world, leaders and managers have acknowledged that a key component of the organisation's effectiveness and competitiveness is employee engagement (Welch, 2011). As the twentieth century progressed, it became increasingly clear that engagement was what really counted (McKergow, 2015). Organisations where high levels of engagement persist are profiting in more than one area but specifically benefit in terms of business performance (Merry, 2014). Engaged employees demonstrate business awareness and willingness to devote extra time and effort for the accomplishment of organisational goals (Matthews, Mills, Trout, & English, 2014).

A particular focus has been placed on employee engagement in recent years as engagement of employees is challenging and trying in the given the dynamic business environment and uncertain global scenario (Chaurasia & Shukla, 2013). Apart from the employee engagement challenge, companies are also faced with corporate and ethical governance (Beddoes-Jones & Swailes, 2015) challenges. In response to ethical matters, leadership knowledge and theory has experienced an increase in Authentic Leadership literature specifically (Algera & Lips-Wiersma, 2012). An emergent body of research has unmistakably demonstrated the benefits of Authentic Leadership for the organisation, as well as factors such as work engagement, overall company performance and productivity (Matthews et al., 2014).

Azanza, Moriano, & Melero (2013) argues that the present context of financial crisis, uncertainty and employment concerns that organisation are faced with, is threatening work engagement resulting in a call for leaders who are able to motivate valuable resources. According to Alfes, Shantz, Truss, & Soane (2013) it is critical that the wider organisation creates a positive climate and environment where employees experience a willingness to transform their levels of engagement into even more positive behaviours. In order to take full advantage of engagement and its benefits, a positive relationship with the organisation is needed (Alfes et al., 2013).

Organisational and management literature have recently started considering the potential benefits of incorporating positive psychological principles to enhance the corporate experience (Mills, Fleck, & Kozikowski, 2013). Positive psychology is the study of what is "right" about people -- their positive

attributes, psychological assets, and strengths. Its aim is to understand and foster the factors that allow individuals, communities, and societies to thrive (Kobau, Seligman, Peterson, Diener, Zack, Chapman & Thompson, 2011). Trepidations concerning leadership are no longer related to the “right” leadership theory or model, but has rather transitioned into a question of how to effectively and efficiently develop leadership who accepts the challenge of creating this organisation climate where engagement can be maximised. Considering these challenges and contexts of organisations today, leadership and engagement are important constructs to be investigated where a myriad of unanswered (and even undiscovered) questions exist to pursue (Day, Fleenor, Sturm, & Mckee, 2014).

Even though many articles portray engagement as the responsibility of leaders to create engagement, not many researchers have conducted investigations on the relationship between leadership and engagement (Hansen, Byrne, & Kiersch, 2014). Given the positive relationship of Authentic leadership with engagement (further discussed in the literature review), the researchers are not only interested in the relationship between leadership and engagement but would also to investigate the effect of mediating variables on this relationship? Previous work suggests that further research is needed on how authentic leadership relate to work engagement (Leroy, Anseel, Gardner, & Sels, 2012).

Shantz & Alfes (2016) postulated that an organisation-related resource (e.g. POS) may be able to compensate for lower engagement levels denoted by the exhaustion of a job-related resource of energy (e.g., engagement). The study by Shantz & Alfes (2016) established that lower levels of employee engagement can be compensated for by POS. The authors of the current study are interested in how POS is related to work engagement and leadership, as it has been found that organisations are able to create appropriate conditions to stimulate engagement. This study aims to contribute to the integration of these areas of research (leadership and engagement) and more specifically examine authentic leadership, employee engagement and POS which explains the relationship amid these variables.

## **Theory and Hypotheses**

Traditional leadership theories and models have become insufficient as the context of leadership has become more complex and has expanded (Kutz & Bamford-Wade, 2013). The organisational support theory explains that employees have expectations around the way in which the organisation honour their contributions and respond to their emotional and social needs. Employees then develop universal attitudes about how much their efforts are appreciated and how concerned the organisation is with their well-being (Esra Dinç, 2015). Mills et al., (2013) posits that POS refers to the employee’s level of recognition for the organisation value of their welfare and appreciation of their contribution.

POS theory follows from the norm of reciprocity and considers that employees whom are supported, will respect and value their organisation and in return contribute to the organisation's goals. This theory additionally posits that socio-emotional needs will be fulfilled by the positive feelings rendered to the employee through POS and endear the employee to the organisation (Dawley et al., 2008). The theory of organisational support and reciprocity, postulates that the degree of perceived organisational commitment of the employee greatly impacts an employee's commitment to the organisation (Mills et al., 2013).

### ***POS and Engagement***

The level of engagement of the employee is moulded and formed by the personal perception that employees have of their working environment (Anitha, 2014). Various studies have tested the facets of POS as well as the relationship of POS and other variables like human resources practices, organisational commitment, job satisfaction etc. (Mills et al, 2013). Although convincing research evidence show that greater engagement levels lead to positive effects for both individuals and the organisation, the literature is only at the early stages of uncovering how an employee's relationship with the organisation is impacted by how these relationships vary (Parker & Griffin, 2011).

The study by Alfes et al., (2013) has taken a nuanced view of engagement's effect on employee behaviour as most other research has focused on POS's direct effects i.e. attitudes and behaviours of employees, leading, for example, to higher levels of engagement (Rich, Lepine, & Crawford, 2010). Alfes et al (2013) suggests that POS may act as a moderator in the relationship between employee engagement but postulates that the extent to which engagement is translated into positive employee behaviours towards the organisation varies as a function of POS. Broader organisational factors increases the benefit for highly engaged individuals. The benefit of POS for employees with a lesser engagement level is therefore not as high (Alfes et al, 2013).

There are different ways for an organisation to express to its employees that it cares for their welfare and have a high regard for their inputs (Kurtessis et al., 2015). One of the factors that were found to be related to POS was leadership and the employees' perception of the organisation's favourable or unfavourable temperament is influenced by the lingering elements of the employees' connection with the organisation (Kurtessis et al., 2015).

Reasonable procedures permit employees to envisage activities resulting in rewards or penalties and therefore advocate that the organisation is worried about the employees' welfare in contrary to individual self-dealing implicit in organisational politics (Cropanzano, Byrne, Bobocel, and Rupp (2001). These authors have discovered fairness to have a solid distinctive influence on POS and that employees perceive the organisation to have more control over procedural justice than other forms of fairness. Most importantly

and related to the objective of the current study is Cropanzano, Byrne, Bobocel and Rupp (2001)'s findings that POS is influenced by several types of inspirational and supportive leadership. Transactional leadership was found to be associated to POS to a lesser degree. Findings by Eisenberger et al., (2010, 2014) suggest that supervisors may vary in the degree to which they are identified with the organisation and that favourable leadership by supervisors is strongly linked to POS (Eisenberger et al., 2010, 2014). Job enrichment circumstances were viewed as most under organisational control and together with intent of the treatment influences POS (Eisenberger, 2010).

Employees with higher levels of POS have a tendency to have higher trust in the organisation and may experience a larger sense of obligation to achieve the goals and objectives of the organisation (Kurtessis et al, 2015). Employees with high levels of POS have a more favourable view of their work and have a greater vested interest in their organisation (Chen et al., 2009). The psychological bond that the employee forms with the organisation is nourished when POS is present and will initiate a process whereby an employee's psychological bond with the organisation is nourished and may contribute to the inclination to exceed the expected behaviour and performance (Agarwal & Gupta, 2015).

### ***POS and Authentic Leadership***

Positive psychology focuses on positive attributes, psychological assets and strengths (Kobau, Seligman, Peterson, Zack, Chapman & Thompson, 2011) and this approach has led to suggestions of when employees are engaged, psychological capital for the future is built and investment is made (Luthans, Luthans, & Luthans, 2004).

Authentic Leadership is increasingly emerging as an integrative concept in the literature on positive organisational behaviour, ethical leadership, and transformational leadership (Baron, 2016). Employees tend to feel more content in their role when regularly experience supportive understanding from leaders together with constructive circumstances which will most like effect their POS level (Kurtessis et al., 2015). Dawley et al., (2007) found that while mentors and supervisors can be effective in endearing the employee to the organisation, the perception of the organisational support might be more important. The consequences of POS can be summarised as commitment towards the organisation, felt obligation, withdrawal behaviours, organisational citizenship behaviour (OCB), organisational trust and lower stress levels (Sihag & Sarikwal, 2015).

Fusco, O Riordan, & Palmer (2015) declare that every epoch has its own leadership theory and considering the amount of research on leadership theory relating to Authentic Leadership, this may indicate the leadership of our time. Authentic leadership may also be a particularly relevant leadership style for South

Africa given the context of our diverse society and results of studies for example Cottrill, Lopez, & Hoffman, (2014) has established that leaders that are authentic contribute to employee perceptions of inclusion and confirms that authentic leaders inspire citizenship behaviour by creating an environment of inclusivity.

According to Cottrill, Lopez, & Hoffman, (2014) leaders that are self-aware, who communicate more willingly and whom incorporate the viewpoints of others in the workplace, are prone to encourage colleagues to contribute to the efficiency of the group and organisation. Not only may authentic leadership be specifically relevant for South Africa but according to Gardner, Cogliser, Davis, & Dickens (2011), a new genuine and value-based leadership was called for following deep rooted apprehensions about the ethical demeanour of today's leaders (e.g., Worldcom, Enron, Martha Stewart) tied with a rise in other challenges within our society (e.g., September 11 terrorism, fluctuating stock values, a downturn in the U.S. economy) (Cooper, Scandura, & Schriesheim, 2005).

### ***POS, Engagement and Authentic Leadership***

Robertson & Cooper (2010), states that various authors felt that the existing frameworks are not sufficient for developing leaders of the future (i.e. Avolio & Gardner, 2005). In their theory of authentic leadership, (Avolio, Walumbwa, & Weber, 2009) suggest that authentic leaders enhance followers' engagement by strengthening the identification of the group members with each other and with the organisation, and promotes hope, trust, optimism, and positive emotions. Eagly (2005) argues that people pursue leaders who will restore and enhance their confidence to collectively achieve more. Authentic leadership has been suggested as "A root construct", which underlies all positive forms of leadership and its development (Avolio & Gardner, 2005). Authentic leadership speaks to personal integrity and character, which influences a leaders' decisions and actions as well as the implications for their own wellbeing and the wellbeing of followers (Gavin, Cooper, Campbell Quick, & Quick, 2003). Authentic leadership has a positive impact on employee attitudes and a better understanding of perceptions will enhance the view of authentic leadership (Hsieh & Wang, 2015) and the impact on engagement.

The outcomes of AL, whether they are conceptualized as mediating or dependent variables, have received much greater empirical attention (Gardner et al., 2011). Hussain & Asif (2012) however has identified POS as one of the key characteristics of organisational behaviour toward employees that drives organisational culture and therefore proposed to have an impact on leadership. Avolio et al. (2009), found a positive relationship between authentic leadership and work engagement. (Wilmar B. Schaufeli, 2015) found a particularly strong and consistent relationship between availability of job resources and work engagement.

The following research objectives are suggested:

Objective 1: to determine whether there a positive linear relationship between authentic leadership and work engagement.

Objective 2: to determine whether POS has a mediating effect on the impact of authentic leadership on work engagement.

Objective 3: to determine whether the sub constructs of authentic leadership and engagement had any specific strong inter correlations.

## Method

### *Sample and Procedure*

The data for this study was gathered from all business units at the South African headquarters of an international Information Technology company. All employees were therefore invited to take part in an online survey that was sent out though an e-mail containing a hyperlink. The employees were assured anonymity as they couldn't be traced based on e-mail or IP address.

### *Measures*

Apart from the demographical questions the survey contained questions from 3 standardised questionnaires as well as questions measuring leadership practices that is not a standardised questionnaire. The different Likert scales for these established questionnaires were kept unchanged.

**Authentic leadership** was measured using the Authentic Leadership Questionnaire (ALQ). The ALQ is the most frequently used measure of authentic leadership (Gardner et al., 2011). The ALQ is a 16-scale item that measures the four constructs of authentic leadership: *self-awareness* (four items), *relational transparency* (five items), *internalised moral perspective* (four items) and *balanced processing* (three items). A 5 point Likert scale ranging from 0-Not at all to 4-Frequently, if not always was used.

**Work engagement** was measured using the 9 item Utrecht Work Engagement Scale-UWES). This self-report questionnaire assesses work engagement, which includes items such as: "I am bursting with energy in my work" (vigour); "My job inspires me" (dedication); "I feel happy when I'm engrossed in my work" (absorption). The measure has been shown to have good internal consistency ( $\alpha = 0.85-0.92$ ; Schaufeli et al., 2006). The UWES has a 7 point Likert scale ranging from 0-Never to 6Always, every day.

**POS** was measured using the shorter scale of 8-item version of the POS survey (Eisenberger et al. 2002). A few of the sample items are: My organisation really cares about my well-being, my organisation strongly

considers my goals and values. Dinç, (2015) found a Cronbach's alpha value of 0.85 for this short scale where all 8 items loaded on one factor and explained 56.91% of the variance (Esra Dinç, 2015). A 7 point Likert scale ranging from 0-Strongly Disagree to 6-Strongly Agree was used.

**Control Variables.** In the analysis, the following control variables were added: gender, job tenure, and level in organisation as well as the size of group reporting to the manager/leader.

According to Schaufeli & Salanova (2007) gender can be associated to feelings of engagement and managers tend to feel more confident in expressing themselves (Kraus, Chen, & Keltner, 2011) than non-managers. We therefore controlled for gender (0=female; 1=male) and managerial position (0=do not have a managerial role; 1=have a managerial role at all levels).

## Analyses

The Cronbach alpha as measure was used to test the internal consistency or reliability of the different sets of items as this statistic is frequently used to measure the consistency of responses (Saunders, Lewis & Thornhill, 2012). This measure is based on the correlations between different items on the same scale where an alpha of 0.7 or above is regarded as acceptable reliability and 0.8 or higher indicated good reliability (Saunders, Lewis, & Thornhill, 2012) which indicates that the questions combined in the scale are measuring the same construct. The self-rating instruments used in this study has an established validity and reliability.

Further item analysis was conducted to see the effect if one of the items was to be removed from the construct. In the case where the Cronbach alpha improves significantly when an item is removed, it would indicate that the item can be removed from the construct. In the analysis of the items used in this survey, all the items correctly identified in the construct and no items had to be removed from the construct.

The mediation model shows a casual sequence in which independent variable (X) affects the dependent variable (Y) indirectly through the mediator variable (M). X is therefore postulated to affect M and this effect then propagates causally through Y (Hayes & Preacher, 2014). This indirect effect represents the mechanism by which X transmits its effect on Y. According to this model, X can also affect Y directly – the direct effect of X – independent of X's influence on M (Hayes & Preacher, 2014). Mediation analysis is used to quantify and examine the direct and indirect pathways through which a variable X transmits its effect on a consequent variable Y through one or more intermediary or mediator variables (Hayes & Scharkow, 2013).

Multiple regression was used to test the research questions. We tested for mediation following the steps outlined by Baron & Kenny (1986). These authors suggest a four step approach utilising hierarchical regression analysis to test the mediating effect of POS in the study. To confirm the mediating effect, there are four prerequisites and they are explained by Dinç (2015) below. First of all, the independent variable is required to have an effect on the dependent variable. Secondly, the independent variable is required to have an effect on the mediator variable. Thirdly, the mediator variable should have an effect on the dependent variable. Finally, the mediator variable is required to have a significant effect on the dependent variable when the independent variable and mediator variable are added to the model. The independent variable’s effect on the dependent variable should therefore lessen or vanish entirely (Dinç, 2015).

## Results

Table 1: Summary of demographical information

	Cronbach Alpha	N	Mean	Standard deviation	1	2	3	4	5	6	7	8
1. Vigour	0.9070	162	5.00	1.55	1							
2. Dedication	0.8960	162	5.67	1.38	0.8352**	1						
3. Absorption	0.7400	162	5.76	1.11	0.6511**	0.7209**	1					
4. Self-awareness	0.8710	165	3.78	1.00	0.4563**	0.4100**	0.30927**	1				
5. Relational transparency	0.8880	165	3.72	0.96	0.4544**	0.3717**	0.35797**	0.8548**	1			
6. Processing information	0.8700	165	3.69	1.00	0.5496**	0.5002**	0.40407**	0.8008**	0.7924**	1		
7. Internalised moral perspective	0.9080	165	3.55	1.07	0.4960**	0.4286**	0.35568**	0.7667**	0.7810**	0.8606**	1	
8. Perceived organisational support	0.8800	162	4.43	1.40	0.5964**	0.5788**	0.44409**	0.5443**	0.5076**	0.5747**	0.5859**	1

Notes: \* p < 0.05 \*\* p < 0.01

In their review of the literature on POS, Rhoades & Eisenberger (2002) has found little relationship between demographical characteristics (i.e. age, education, gender and tenure) and POS. The findings of the specific demographical variables is discussed below.

### Control Variables

**Gender.** The sample comprised of 120 males (59.4%) and 82 females (41.6%). Table 2 below shows the mean scores for authentic leadership, work engagement and POS across gender. The authentic leadership, engagement and POs mean scores were all higher for the male respondents.

**Business Units.** Table 2 reflects the mean scores across business units and one department reflected higher scores across all three variables. There is one business unit that scored a higher score for Authentic Leadership than that of the Global Business Services (GBS) division but overall the GBS division had the highest score across all 3 variables. The mean score levels for authentic leadership was a little higher for GBS and the Real Estate Strategy and Operations (RESO) division. For work engagement, the mean scores were higher for GBS and Sales and distribution and finally for POS the mean scores were higher for GBS and Software Group.

Table 2: Mean scores across business units

Business Units	Number of respondents	Authentic Leadership	Work Engagement	Perceived Organisational Support
Global Business Services	74	<b>3.92</b>	<b>5.75</b>	<b>4.68</b>
Global Technology Services	41	3.15	4.63	3.54
Integrated Operations	13	3.46	5.35	4.16
Sales & Distribution	33	3.65	<b>5.77</b>	4.45
Software Group	29	3.84	5.58	<b>4.84</b>
Systems and Technology Group	10	3.74	5.27	4.56
Real Estate Strategy and Operations	2	<b>4.09</b>	4.00	3.88

**Tenure.** The average tenure of respondents was 6.13 years. One third of the sample (29.21%) have been with the company for more than 10 years. Interestingly the mean scores for authentic leadership, engagement and POS was higher for the group that have been at the company for less than a year. A little lower score was found for the group that has been with the company between 3 and 5 years but shows higher averages across all three (3) variables. Literature has found that engagement is inversely related to tenure (Xu & Thomas, 2011) and yet in their study Xu and Thomas (2011) found that tenure did not correlate positively with engagement.

Table3: Mean scores across tenure

Tenure	Number of respondents	Authentic Leadership	Work Engagement	Perceived Org Support
Less than 1 year	42	<b>4.12</b>	<b>6.09</b>	<b>5.33</b>
1 to 2 years	45	3.68	5.49	4.34
3 to 5 years	24	<b>3.81</b>	<b>5.65</b>	<b>4.60</b>
6 to 9 years	32	3.40	4.98	3.84
10 and more years	59	3.47	5.16	3.98

**Level in Organisation.** An interesting finding was that the executive level as well as the LDC program level scored higher levels on all three variables. The respondents represented a range of levels in the organisation including executives (5.94%), business unit leaders (3.47%), middle managers (9.9%), people managers (6.44%), specialist role (47.52%) and special program incumbents (26.74%).

Table 4: Mean scores across level in the organisation

Level in organisation	Number of respondents	Authentic Leadership	Work Engagement	Perceived Org Support
Executive	12	<b>4.13</b>	<b>6.46</b>	<b>5.74</b>
Business unit leader	7	3.96	5.70	4.86
Middle management	20	3.54	5.62	4.30

People manager	13	3.82	5.59	4.58
Specialist role	96	3.43	4.96	3.80
CBD program	9	3.08	5.00	3.56
LDC program	45	<b>4.12</b>	<b>6.13</b>	<b>5.29</b>

The Cronbach's alpha results for these scales was measured to be 0.9608 (ALQ), 0.9309 (UWES) and 0.8805 (POS). These high alpha values relates to very high internal consistency between the items for each construct.

Table 5: Cronbach's alpha

Construct	Item	Authentic Leadership	Work Engagement	Perceived Organisational Support
Authentic Leadership	1	0.9585		
	2	0.9581		
	3	0.9578		
	4	0.9591		
	5	0.9613		
	6	0.9575		
	7	0.9588		
	8	0.9574		
	9	0.9577		
	10	0.9581		
	11	0.9587		
	12	0.9581		
	13	0.9587		
	14	0.9575		
	15	0.9573		
	16	0.9574		
Work Engagement	17		0.9193	
	18		0.9182	
	19		0.9145	
	20		0.9143	
	21		0.9202	
	22		0.9226	
	23		0.9258	
	24		0.9299	
	25		0.9381	
Perceived Organisational Support	26			0.8629
	27			0.8730
	28			0.8608
	29			0.8698
	30			0.8604
	31			0.8670
	32			0.8615
	33			0.8696
Sub Total		0.9608	0.9309	0.8805

Item analysis was conducted to investigate how the Cronbach alpha will be affected if one of the items for the specific construct and sub construct was removed. Should the Cronbach improved significantly with the removal of an item, it would be sensible to remove the item from the construct. In our analyses all the items were found to be correctly identified in the construct and there was no need to remove any items from the construct. All the individual items were found to be highly correlated with the total (rule of thumb is that the correlation with the total should be 0.7 or higher). If any of the individual items were to be deleted, the Cronbach alpha will actually decrease, therefore all the items should remain in the construct.

Table 6: Descriptive statistics, correlation and scale reliabilities for main variables

	Cronbach Alpha	N	Mean	SD	1	2	3
1. Authentic Leadership	0.961	165	3.70	0.93	1		
2. Work Engagement	0.930	162	5.48	1.23	0.5089**	1	
3. Perceived Org Support	0.880	162	4.43	1.40	0.5927**	0.6018**	1

Notes: \* p < 0.05 \*\* p < 0.01 SD: Standard Deviation

Table 7: Descriptive statistics, correlations and scale reliabilities for sub constructs

	Cronbach Alpha	N	Mean	SD	1	2	3	4	5	6	7	8
1. Vigour	0.961	162	5.00	1.55	1							
2. Dedication	0.966	162	5.67	1.38	0.8352**	1						
3. Absorption	0.961	162	5.76	1.11	0.6512**	0.7209**	1					
4. Self-awareness	0.930	165	3.78	1.00	0.4564**	0.4100**	0.3093**	1				
5. Relational Transparency	0.880	165	3.72	0.96	0.4544**	0.3718**	0.3579**	0.8548**	1			
6. Processing Information	0.870	165	3.69	1.00	0.5496**	0.5003**	0.4041**	0.8008**	0.7925**	1		
7. Internalised Moral Perspective	0.908	165	3.55	1.07	0.4961**	0.4286**	0.3557**	0.7667**	0.7810**	0.8607**	1	
8. Perceived Org Support	0.880	162	4.43	1.40	0.5965**	0.5788**	0.4441**	0.5444**	0.5077**	0.5747**	0.5859**	1

Notes: \* p < 0.05 \*\* p < 0.01 SD: Standard Deviation

**Factor analysis.** We investigated whether respondents were able to distinguish among the sub constructs. Table 8 and 9 shows the Varimax rotation of the principal components solution for engagement and authentic leadership.

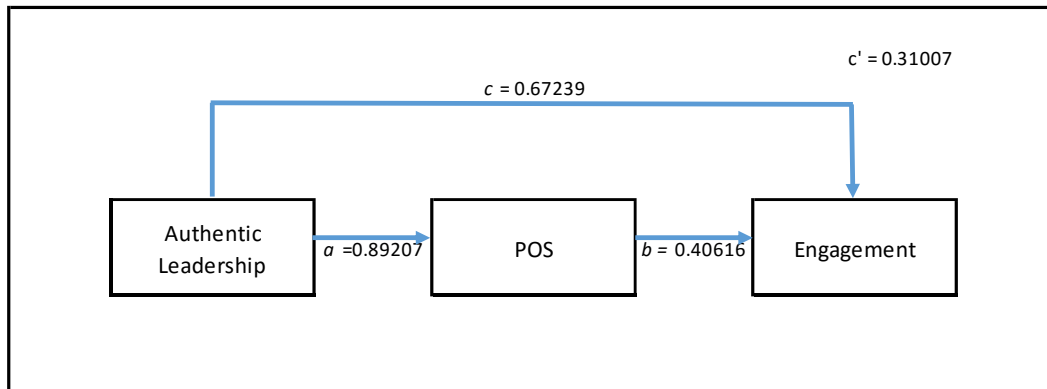
The principal component analysis provided us with further insight into the factors that provide and account for meaningful amounts of variance. The varimax rotation was applied to the 9 items of the UWES engagement scale. The two factors explained 70.57% of the variance. Under the first factor, items indicate engagement characteristics. This factor incorporates all three of the vigour items, two of the dedication items and 1 of the absorption item (total of 6 out of the 9 items) and explain a total of 58.89% of the variance. The second factor of this scale contains 2 of the absorption items as well as 1 of the dedication items and together explains 11.68 of the variance. For the engagement construct it can be concluded that

the sub-constructs of vigour and dedication provided meaningful variance as a single construct where absorption provided a separate construct loading. (Please refer to Appendix A in the article for the Varimax rotation loadings for engagement)

The authentic leadership scale was also factor analysed with Varimax rotation. Interestingly the scale only loaded on 2 factors and explained 112.93% of the variance. The first factor explained 63.49% of the variance and included 3 items of the processing information sub construct, all 3 of the items of the internalised moral perspective construct, 2 of the self-awareness construct as well as 1 of the relational transparency construct. The second factor that explained 49.44% of the variance consisted of the remainder of the 4 relational transparency sub construct, 2 self-aware items as well as 1 of the processing information sub construct (Please refer to Appendix B in the article for the Varimax rotation loadings for authentic leadership).

Results indicate that authentic leadership is significantly related to engagement, thereby meeting the first condition for mediation and offering support for H<sub>1</sub>1. The results additionally reveal that POS is significantly related to engagement, and that authentic leadership is significantly related to POS; therefore, and the next two requirements of mediation have been met. Finally, when both the independent (Authentic Leadership) and mediator (POS) variables are put into the model together, both remain significant, **indicating partial mediation**.

Indirect effect 1 =  $c - c' = 0.67239 - 0.31007 = \mathbf{0.362323}$



Morera & Castro (2013) encourages researchers to report measures of effect sizes as opposed to full or partial mediation. Supplementary to the Judd and Kenny approach, the Sobel approach or test was therefore used to confirm the Judd and Kenny results (Hayes, 2009). In order to assess mediation through the Sobel approach, the direct  $ab$  cross product should be tested (Morera & Castro, 2013). According to Fritz & Mackinnon, (2015) the Sobel first-order test is a widespread product-of-coefficients test that assesses mediation.

The  $ab$  cross product has been used. The same result of 0.362323 for the indirect effect was found. Indirect

effect 2 =  $b(a) = 0.40616(0.892) = 0.362323$

Koopman, Howe, Hollenbeck, & Sin (2015) contests the use of bootstrapping for use in smaller samples of 20 – 80 cases. The current study however has a bigger sample and double the size of 80 which is considered small according to these authors and bootstrapping was therefore used.

Table 8: Results for hierarchical regression analysis.

Criterion Variables	
<b>Predictors</b>	<b>Engagement</b>
Step 1	
Authentic Leadership	0.672**
Adjusted R <sup>2</sup>	0.254
F statistic	55.92
	<b>Perceived Organisational Support</b>
Step 2	
Authentic Leadership	0.892**
Adjusted R <sup>2</sup>	0.347
F statistic	86.63
	<b>Engagement</b>
Step 3	
Perceived Organisational Support	0.528**
Adjusted R <sup>2</sup>	0.358
F statistic	90.84
	<b>Engagement</b>
Step 4	
Authentic Leadership	0.310*
Perceived Organisational Support	0.406**
Adjusted R <sup>2</sup>	0.390
F statistic	52.53

Notes: n = 162, \* p < 0.0025, \*\* p < 0.01

In order to determine whether the indirect effect (of 0.362323) is significant we therefore make use of the Bootstrap samples (as they don't assume normal distribution of the sample) to determine the standard error of the indirect effect.

Path analysis is an established technique used to assist social scientists with analysis of relationships amongst multiple variables and a multiple-regression variation (Stage, Carter, & Nora, 2004). Path analysis was thus used as the bootstrap intervals are obtained from this approach and also provides a number of fit indices to evaluate the overall proposed model.

Table 9: Regression estimates for proposed model of research

<b>Fitness Indices</b>	<b>Estimate</b>	<b>S.E.</b>	<b>C.R.</b>	<b>P</b>
Perceived Organisational Support <--- Authentic Leadership	0.892	0.085	10.486	***
Engagement <--- Perceived Organisational Support	0.406	0.079	5.154	***
Engagement <--- Authentic Leadership	0.310	0.110	2.81	0.005

Notes: C.R. > +/- 2.58 test significance of estimate at  $p < 0.01$

\*\*\* Significance less than 0.001

The level of significance in table 12 is based on the critical ratio (CR) of the regression estimate. In the case where CR values are greater of equal to 2.58, a 99 percent level of significance is indicated.

The model was tested to understand how well the data fits with the proposed model. There are established rules of thumb that is used to understand whether a model fits the data. The criteria for a good fit and acceptable fit in table 12 below, was retrieved from (Schermelleh-Engel, Moosbrugger, & Müller, 2003). The goodness of fit index (GFI), comparative (CFI) and normed fit index (NFI), values greater than 0.95 represent a good model fit. For the root mean square error of approximation (RMSEA) a value less than 0.05 is considered a good fit and less than 0.08 is an adequate fit. Considering the RMSEA there is slight room for improvement but the other indices indicate a good fit.

Table 10: Fit Indices for Proposed Model of Research

	Fitness Indices	Established Rules & Criteria		Proposed Model	
		Good Fit	Acceptable Fit	Measure of Index	Remarks
1	Chi Square value	$0 \leq \chi^2 \leq 2df$	$2df < \chi^2 \leq 3df$	5.527	Accept the model
	p-value	$0.05 < p \leq 2df$	$0.05 \leq p \leq 2df$	0.063	
2	Normed Fit Index (NFI)	$.95 \leq NFI \leq 1.00$	$.90 \leq NFI < .95$	0.963	Good Fit
3	CMIN/DF	$< 2^a$	$< 5^b$	2.763	Good Fit
4	Root Mean Square Residual (RMR)	$< 0.05^a$	$< 0.08^b$	0.117	Room for improvement
5	Comparative Fit Index (CFI)	$.97 \leq CFI \leq 1.00$	$.95 \leq CFI < .97$	0.976	Good Fit
6	Incremental Fit Index (IFI)	$1 < IFI < 1$	$1 < IFI < 1$	0.976	Acceptable
7	Relative Fit Index (RFI)	$> 0.90^a$	$> 0.90^a$	0.945	Good Fit
8	Goodness of Fit Index (GFI)	$.95 \leq GFI \leq 1.00$	$.90 \leq GFI < .95$	0.977	Good Fit
9	Adjusted Goodness of Fit Index (AGFI)	$.90 \leq AGFI \leq 1.00$	$.85 \leq AGFI < .90$	0.931	Good Fit
10	Tucker-Lewis Index (TLI)	$> 0.90^a$	$> 0.90^a$	0.964	Good Fit
11	Root Mean Square of Approximation (RMSEA)	$< 0.05^a$	$< 0.08^b$	0.105	Room for improvement

## Discussion

This section of the document is dedicated to the discussion of the results of the specific objectives and underlying hypotheses as explained in section 3 of this document.

Objective 1: to determine the relationship between authentic leadership and work engagement found in other studies, can also be found in this particular dataset.

- $H_01$ : There is no linear relationship between authentic leadership and work engagement
- $H_11$ : There a linear relationship between authentic leadership and work engagement

The null hypothesis for objective 1 can be rejected and therefore the alternate hypothesis was confirmed by the results of the analysis of this specific sample group. The results showed a statistically significant positive correlation coefficient of 0.6723 with a 0.0001 p-value between authentic leadership and work

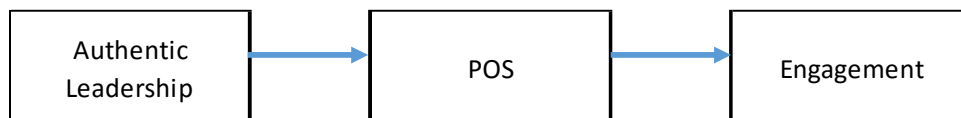
engagement.

The results of this study supports the literature findings of a positive correlation between authentic leadership and engagement (Azanza et al., 2013; Elstob & Scheepers, 2014; Shu, 2015; Wang & Hsieh, 2013).

Given the positive correlation between authentic leadership and engagement, companies will benefit from fostering and developing authentic leaders within the organisation. Giallonardo, Wong & Iwasiw (2010) have found that the employee first identifies with the leader which in turn enhances identification with the work group. This positive relationship in turn fosters trust in the leader. When organisation develop authentic leaders with whom employees can identify and build trust with, employees are more likely to be engaged in the workplace. An engaged workforce in turn leads to beneficial outcomes for the organisation where the benefits of engagement can be maximised (Alfes et al., 2013).

Objective 2: to determine whether POS has a mediating effect on the impact of authentic leadership on work engagement.

- H<sub>0</sub>2: POS has no mediating effect on the impact of authentic leadership on work engagement
- H<sub>1</sub>2: POS has a mediating effect on the impact of authentic leadership on work engagement



The results for objective 2 of this study concluded that the null hypothesis can be rejected and the alternate hypothesis was therefore confirmed. These results were based on the mediator regression model where, based on the Cronbach alphas, the three main constructs were confirmed and used in the regression. The total effect of authentic leadership on engagement measured by the parameter estimate was 0.67239 at a significance level of 0.0001. The total effect of authentic leadership on POS was measured by the parameter estimate as 0.89207 also at a significance level of 0.001. The total effect of POS on engagement was also found to be significant at 0.0001 level with a coefficient of 0.52825. Based on the significant relationships of all three these models, the fourth model was also tested controlling for authentic leadership. Authentic leadership was found to be still significant when controlling for POS. It could therefore be concluded that the findings supported partial mediation through the mediator POS.

The findings of this research objective confirms that authentic leaders will be enabled to establish higher levels of engagement when employees perceive the organisation to have positive levels of collaboration and support. Individuals are encouraged intrinsically to exert increased levels of effort (Biswas & Bhatnagar, 2013) when they perceive the organisation as supportive. Thus, when the context of authentic leadership exists and employees experience a supportive environment within the organisation, higher levels of engagement is more likely.

Objective 3: to determine whether the sub constructs of authentic leadership and engagement showed specific strong inter correlations.

This study has tested beyond the direct association of authentic leadership and engagement and the results offers us a deeper understanding of the role POS plays in the context of organisations within the world of work today where authentic leadership assist with identification with others in the work group or increased work engagement (Farndale & Murrer, 2015). In this study it was concluded that POS partially mediates the relationship between authentic leadership and engagement. Making a distinction between full and partial mediation, theory can be influentially tested and social psychological knowledge can be further developed (Rucker, Preacher, & Tormala, 2011). As the result was partial mediation, it indicates that there are other factors that influences this relationship and as expected POS is not the only factor that impacts this relationship but more importantly the influence as a mediating variable has been confirmed.

### ***Limitations and Research Directions***

This study makes a contribution as it examines the relationship between variables that have not been well studied in this specific relationship before, and thus anticipate to inspire further research and the practical applications thereof. The sample size was small and was restricted to one specific industry. The findings is therefore more relevant to other companies within the same industry and cannot necessarily be generalised to all other industries. Due to the time constraints of the cross-sectional nature of the study, which was not able to provide the same amount of depth than a longitudinal study would be able to contribute.

The specific leadership style of authentic leadership was chosen for this study and it can therefore not be applied to the impact of the different leadership styles.

Saks & Gruman (2014) suggests that an engagement measure that is more distinct from other constructs should be developed. Future research can re-look the specific measure of engagement, something that was outside the scope of this specific research. Future research may want to consider refining the measures of

engagement and investigate the other scales that may already exist but may need refinement (Saks & Gruman, 2014).

With organisational inclusion being of specific relevance in a diverse country like South Africa and according to Cottrill et al. (2014), organisational inclusion being a new topic in organisational research, it would be relevant to study and understand how specific leadership competencies like authenticity influences (possible antecedent of inclusion) influences a possible outcome of inclusion, i.e. engagement.

### **Implications for Management**

The practical implications of this study relates to leadership and engagement levels for organisations. The results showed that it is beneficial for leaders to develop authentic leadership skills to improve levels of engagement within organisation through the POS that employees experience. Erkutlu, (2013) posits that it is essential to consider the key organisational factors which facilitates authentic leadership development through strong support from senior management (being role models and providing resources) as well as incorporating authentic leadership metrics in performance evaluations and metrics.

Employees with lower engagement levels do not unfortunately benefit as much from POS than employees with higher levels of POS. The implication for managers is that the initial focus on an employee would be to increase their level of engagement after which it can be supplemented with an environment that is perceived to provide support for the individual (Alfes et al, 2013). This understanding can form part of the leadership development program in an organisation.

This study also provides further information on the reliability and validity of the ALQ instrument that encourages future use.

### **Conclusion**

As Fusco, Riordan, & Palmer (2015) declared, authentic leadership may very well be the leadership theory relevant to our time given the relevance to the complex environment where engagement of employees are challenged (Day et al., 2014). This study has shown that the relationship between authentic leadership is rather multifaceted and as proven by the partial mediation, not only one factor influences the conditions under which engagement can be strengthened. The partial mediation result does however confirm that authentic leaders are more able to influence the engagement of employees when employees perceive their organisation as being supportive. The conclusions of our study validates the findings of (Kurtessis et al., 2015) that employees feel more content and engaged in their role when they experience and perceive leaders and the organisation as supportive. POS therefore provide favourable conditions under which authentic

leadership can positively influence the engagement levels of followers. Other authors (Rhoades & Eisenberger, 2002; Sihag & Sarikwal, 2015; Elstob & Scheepers, 2015) have investigated different factors in relation to POS. Our study supports their findings that suggest additional variables that serve and underpin the relationship between leadership and engagement.

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Appendix A: Varimax rotation loadings for engagement

Items	Factor 1	Factor 2
c - Dedication 1	0.90174	
d - Dedication 2	0.87091	
b - Vigor 2	0.86855	
a - Vigor 1	0.85336	
e - Vigor 3	0.83949	
f - Absorption 1	0.75022	
h - Absorption 2		0.87482
i - Absorption 3		0.85959
g - Dedication 3		0.65556
Eigenvalues	0.86387	0.50372
Percentage of explained variance	58.89	11.68
Total variance:	70.57	

Appendix B: Varimax rotation loadings for authentic leadership

Items	Factor 1	Factor 2
l - Processing Information	0.86849	
m - Processing Information	0.81258	
o - Internalised Moral Perspective	0.81097	
n - Internalised Moral Perspective	0.79457	
p - Internalised Moral Perspective	0.77095	
k - Processing Information	0.69593	
b - Self-awareness	0.65282	
c - Self-awareness	0.64606	
h - Relational Transparency	0.64373	
e - Relational Transparency		0.82563
d - Self-awareness		0.77222
a - Self-awareness		0.72692
g - Relational Transparency		0.72292
f - Relational Transparency		0.67600
l - Relational Transparency		0.64336
j - Processing Information		0.58178
Eigenvalues	0.76037	0.64949
Percentage of explained variance	63.49	49.44
Total variance:	112.93	

## 5. Supporting Document

**Gordon Institute  
of Business Science**  
University of Pretoria

Investigating the mediating effect of perceived organisational support on the relationship between authentic leadership and work engagement.

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A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

## Abstract

Using positive psychology and the theory of organisational support and reciprocity, we examined whether perceived organisational support (POS) mediates the relationship between authentic leadership and engagement. Authentic leadership and engagement have been investigated extensively however not in relation to POS within the same study. Given the context of the world of work today, there is a need to move beyond the direct association between leadership and engagement to study how other variables may strengthen or weaken this relationship. Data was collected from 202 employees, working in an international information technology organisation and results were analysed at the group level. Regression analysis was used to test for mediation, followed by statistical tests of the indirect effect as well as bootstrapping. Differences between subgroups were also investigated and model fit analysis to establish whether the suggested model was a good fit. The results showed that POS partially mediates the relationship between authentic leadership and engagement. Further practical implications of the findings are discussed, together with limitations and ideas for future research.

## Keywords

Authentic Leadership

Work Engagement

POS

## 5.1 Introduction

Across the world, leaders and managers have acknowledged that a key component of the organisation's effectiveness and competitiveness is employee engagement (Welch, 2011) and the argument is that successful organisations in contemporary business environments are those that engage their people. Whereas engagement wasn't relevant in the era of mass production engagement (McKergow, 2015), as the twentieth century progressed, it became progressively evident that engagement was what really counted (McKergow, 2015). An abundance of management and communication research shows that employee engagement has positive individual and organisational outcomes (Saks, 2006). Organisations where high levels of engagement persist are profiting in more than one area but specifically benefits in terms of business performance (Merry, 2014). Engaged employees demonstrate business awareness and willingness to devote extra time and effort for the accomplishment of organisational goals (Matthews et al., 2014).

The association between employee engagement and organisation financial performance was inspected by Aon Hewitt (2015) using data from 94 global companies across a period of 5 years. This specific investigation revealed a strong positive correlation between improved employee engagement and sales growth in the succeeding years (Merry, 2014). A supplementary 0.6 % growth in sales was the result of every incremental percentage point of employee engagement (Hewitt, 2015). Today's environment is constrained by resources and aside from increasing growth in sales, there is an imperative need for companies to be able to not only create productivity but also motivation (Merry, 2014) amongst their employees.

Apart from the employee engagement challenge, companies are also faced with corporate and ethical governance (Beddoes-Jones & Swailes, 2015) challenges. In response to ethical matters, leadership knowledge and theory has experienced an increase in Authentic Leadership literature specifically (Algera & Lips-Wiersma, 2012). An emergent body of research has unmistakably demonstrated the benefits of Authentic Leadership for the organisation, as well as factors such as work engagement, overall company performance and productivity (Matthews et al., 2014). It is therefore interesting to compare the increase in theoretical research as well as the practitioner heightened awareness of engagement and authentic leadership which will be further explored in the following section of literature review.

Azanza, Moriano, & Melero (2013), consequently argues that organisations, in the present financial crisis persistent with uncertainty and temporary employment work engagement is threatened and calls for leaders who not only motivate employees but motivate valuable resources to reduce organisational brain drain. It is suggested that authentic leadership assist in retaining employees through heightened identification with the work group and ultimately lead to work engagement being

increased. Engagement is set to remain an important topic on both the academic and practitioner agenda, so it is important we continue to improve our understanding of this construct (Farndale & Murrer, 2015).

According to Alfes, Shantz, Truss, & Soane (2013) it is critical that the wider organisation creates a climate as well as an environment that is positive where employees experience a willingness to transform their levels of engagement into even more constructive behaviours. It is merely no longer sufficient to only engage employees in their work as the need for a positive relationship with the organisation is also needed in order to take full advantage of engagement and its benefits (Alfes et al., 2013).

All organisations care about leadership and the concerns is not about the “right” leadership theory or model, but how to effectively and efficiently develop leaders and leadership who accepts the challenge of creating this organisation climate where engagement can be maximised. Considering these challenges and contexts of organisations today, this is an important area of investigation where a myriad of unanswered (and even undiscovered) questions exist to pursue (Day et al., 2014).

Even though many articles portray engagement as the responsibility of leaders to create engagement, not many researchers have conducted investigations on the relationship between leadership and engagement (Hansen et al., 2014). Given the positive relationship of Authentic leadership with engagement (further discussed in the literature review), the researchers are not only interested in the relationship between leadership and engagement but would also to investigate the effect of mediating variables on this relationship. Previous work suggests that further research is needed on how authentic leadership relate to work engagement (Leroy et al., 2012).

Employees who are engaged, do however behave in different ways (Parker & Griffin, 2011) they may exhibit less citizenship behaviours or show a smaller amount of loyalty, not because they lack enthusiasm for their job, but instead because conditions in the working environment do not lead them to do so. Consequently the employee engagement literature is faced with some important implications, as the circumstances or state of affairs where favourable behaviours are the outcome of engagement, are still not fully understood (Parker & Griffin, 2011). These authors suggest that the environment of the work landscape be further researched and explored to understand the relevancies in directing and focusing individuals’ levels of engagement in positive ways for example POS (Alfes et al., 2013).

Shantz & Alfes (2016) postulated that an organisation-related resource (e.g. POS) may be able to compensate for lower engagement levels denoted by the exhaustion of a job-related resource of

energy (e.g. engagement). The study by Shantz & Alfes (2016) established that lower levels of employee engagement can be compensated for by POS. The authors of the current study are interested in how POS is related to work engagement and leadership, as it has been found that organisations are able to create appropriate conditions to stimulate engagement.

The purpose of this study is therefore to examine authentic leadership, employee engagement and POS which explains the relationship amid these variables.

## 5.2 Theoretical background

In the introduction above is it evident that engagement and authentic leadership is topical construct for research. Given the context of the organisation in the 21<sup>st</sup> century, the following section will endeavour to look at the interrelations between these two constructs and the link to the role that the employee's perception of the organisation's support plays given these relationships.

### 5.2.1 Perceived Organisational Support

POS in terms of providing resources (financial and non-financial) counters the negative effects of stressful job demands and poor working conditions and has thus been identified as an antecedent of employee engagement ((Anitha, 2014; Robinson, D., Perryman, S. and Hayday, 2004; Wollard & Shuck, 2011). There is also some evidence that changes in job resources (e.g., increases in social support and performance feedback) predict engagement over a period of one year (Schaufeli, Bakker, & Van Rhenen, 2009), and that job resources are particularly important for promoting engagement when job demands are high (Bakker, Hakanen et al., 2007).

POS theory follows from the norm of reciprocity and considers that supported employees, will value and respect their organisation and in return contribute to the organisation's goals. This theory further posits that positive feelings rendered to the employee through POS will fulfil socio-emotional needs and endear the employee to the organisation (Dawley et al., 2008). The theory of organisational support and reciprocity postulates that the degree of perceived organisational commitment of the employee greatly impacts an employee's commitment to the organisation (Mills et al., 2013). Rhoades & Eisenberger, (2002) found that when employees perceived support from their organisation, they were more likely to commit to the organisation in return (Mills et al., 2013).

The Job Demands-Resources (JD-R) model explains antecedents to engagement (Demerouti et al., 2001), whereby job resources help achieve work goals or reduce job demands (Farndale & Murrer, 2015). Job resources refer to those aspects of the job that are functional in achieving work goals, stimulate personal growth and development, and reduce job demands and their associated physiological and psychological costs and include aspects such as job control, opportunities for

development, participation in decision making, task variety, feedback, and work social support (Crawford et al, 2010).

Job resources can however occur at organisational, interpersonal, job, and task levels (Bakker et al., 2004; Farndale & Murrer, 2015). At the organisational level, financial rewards motivate employees in exchange for labour (i.e. base salary), and monetary premiums for good performance (Demerouti, 1999). At the interpersonal level, team climates create resources through the extent to which team members “construe themselves as interrelated to others rather than as independent and unique” (Bakker et al., 2006). When team members feel empathy toward their co-workers, and frequently exchange views with one another, emotional contagion of engagement occurs (Bakker et al., 2006). At job level, feedback provides employees with information on their performance from superiors, colleagues, or through the work process (Demerouti, 1999). Finally, at task level, participation in decision making allows employees to experience decision latitude (Karasek, 1979).

A different view on the work environment is painted by Anitha (2014) where the work environment is expected to create a shared sense of destiny with others and to encourage employees to emotionally connect with one another to achieve high levels of engagement. Employees’ personal perception of their work environment therefore shapes and directs how engaged an employee is. To have a positive perception, it is important to have a supportive working environment (Anitha, 2014).

### 5.2.2 The Relationship between Perceived Organisation Support and Engagement

Various studies have tested the facets of POS as well as the relationship of POS and other variables like human resources practices, organisational commitment, job satisfaction etc. (Mills et al., 2013). From these various studies, it seems that POS contributes to various elements of the employees’ well-being and organisational outcomes. It was therefore worthwhile to search the literature for more studies and specifically any studies that considered the relationship of POS and engagement.

In one of these studies considering the relationship between POS and engagement, Alfes et al., (2013) have found that POS is a pivotal variable in explaining the relationship between human resource management practices and employee outcomes and suggested that future research explores the moderating effect of POS on the relationship between employee engagement and other variables. Although convincing research evidence show that higher levels of engagement lead to favourable outcomes for individuals and the organisation, the literature is only at the early stages of uncovering how these relationships vary as a function of an employee’s relationship with the organisation (Parker & Griffin, 2011). The study by Alfes et al., (2013) has taken a nuanced view of engagement’s effect on employee behaviour as most other research has focused on the direct effects of POS i.e. employee attitudes and behaviours, leading, for example, to a higher degree of

engagement (Rich et al., 2010).

### 5.2.3 Leadership and Perceived Organisation Support

There are different ways for an organisation to express to its employees that it cares for their well-being and have a high regard for their inputs (Kurtessis et al., 2015). Factors that were found to be related to POS were: leadership and its supportive aspects, fairness, HR practices, and working conditions. The employees' perception of the organisation's favourable or unfavourable temperament is influenced by the chronic or recurring elements of the employees' relationship with the organisation Kurtessis et al., (2015)

Fair procedures permit employees to envisage the activities that will result in rewards or penalties and therefore advocate that the organisation is worried about the employees' welfare in contrary to individual self-dealing implicit in organisational politics (Cropanzano, Byrne, Bobocel, and Rupp (2001). These authors have found that fairness has a strong distinctive contribution to POS and that employees perceive the organisation to have more control over procedural justice than other forms of fairness. Organisational politics however showed a strong negative relationship with POS. and higher-level employees were found to be more closely identified with the organization than lower-level employees. Support from the supervisor was also found to be related strongly to POS than co-worker support. Most importantly and related to the objective of the current study is Cropanzano, Byrne, Bobocel and Rupp (2001)'s findings that various types of inspirational and supportive leadership contributed substantially to POS. In contrast, initiating structure and transactional leadership were far less associated with POS. Findings by Eisenberger et al., 2010, 2014) suggest that supervisors may vary in the degree to which they are identified with the organisation and that favourable leadership by supervisors is strongly linked to POS (Eisenberger et al., 2010, 2014). Job enrichment conditions were viewed as most under organizational control. Thus, it is not simply the impact of treatment that influences POS but the organization's control and intent behind favourable or unfavourable treatment (Eisenberger, 2010).

### 5.2.4 Outcomes of Perceived Organisation Support

Kurtessis et al., (2015) found that POS was positively related to social exchange and negatively related to economic exchange where high-POS employees tend to express higher trust in the organisation. Employees with high-POS have been found to experience greater obligation (and similarly defined normative commitment) that they will channel toward the organisation's goals and objectives, showing higher affective commitment but also having a greater expectation with regards to rewards for high performance.

POS have been found to be positively related to job satisfaction, job self-efficacy, organization-based

self-esteem, and work–family balance and have been found to be negatively related to job stress, burnout, and work–family conflict (Kurtessis et al., 2015). Evidence indicates that employees with high levels of POS judge their jobs more favourably (e.g. increased job satisfaction, more positive mood, reduced stress) and are more invested in their organization (e.g., increased affective organisational commitment, increased performance and reduced turnover) (Chen et al., 2009). POS initiates a process whereby an employee’s psychological bond with the organisation is nourished resulting in a willingness to go beyond the call of duty and be engaged (Agarwal & Gupta, 2015).

When a consistent pattern of supportive experiences with leaders and favourable job conditions leads to POS such that workers see the organization as dispositional supportive, workers may be happier in their jobs (Kurtessis et al., 2015). A study by Dawley et al., (2007) found that while mentors and supervisors can be effective in endearing the employee to the organisation, the perception of the organisational support might be more important. The consequences of POS can be summarised as organizational commitment, felt obligation, withdrawal behaviours, positive mood, job performances, OCB, organisational trust and reduced stress (Sihag & Sarikwal, 2015).

### **5.2.5 The impact of Authentic Leadership on Engagement**

Organisational and management literature have recently started considering the potential benefits of incorporating positive psychological principles to enhance the corporate experience (Mills et al., 2013). Positive psychology focuses on positive attributes, psychological assets and strengths (Kobau, Seligman, Peterson, Zack, Chapman & Thompson, 2011) and this approach has led to suggestions of when employees are engaged, psychological capital for the future is built and investment is made (Luthans, Luthans, & Luthans, 2004).

Previous studies have pointed out that authentic leadership has a positive impact on employee attitudes, behaviour and work outcomes. The effect of authentic leadership on employee attitudes and behaviour should not only depend on employees’ perceptions but also on those of the supervisors. The reason is that supervisors may believe that they are exhibiting total authenticity, while employees may only perceive part of this authenticity (Hsieh & Wang, 2015). By understanding the gap in perceptions and the potential difference the impact the two perceptions have, we can gain a more complete picture of the effect of authentic leadership (Hsieh & Wang, 2015). When supervisors and leaders value the feelings of employees, and the employees perceive this, both parties interact authentically and the employees become more engaged in their work (Hsieh & Wang, 2015)

### 5.2.6 Research that hasn't been conducted

Following the review of the literature and the research that has been completed, it is also important to consider the research that has not yet been conducted. With regards to engagement Jiang & Men (2015) suggested that future research examine potential drivers of employee engagement in more detail.

The literature suggests that further studies be conducted on authentic leadership to investigate the influence of the organisation's culture, climate and context on authentic leadership and authentic followership. Further suggestions for research includes investigating other factors such as performance and unit effectiveness in order to assess organisational outcomes of authentic leadership and the mediating role of work engagement (Azanza et al., 2013). Gardner et al., (2011) encourage that considers the extent to which contextual and individual difference variables serve as antecedents and moderators of the level of authenticity achieved in leader–follower relationships.

Research suggestions on POS include OCB and engagement that are still under investigation and should be investigated thoroughly.

The above-mentioned suggestion for future research confirms the researchers' objective for the current study to investigate whether the way in which employees perceive their organisation's support for them, influences the way in which engagement is enabled by Authentic Leadership behaviour.

### 5.3 Research Objectives

This study aims to explore the intervening variable, POS, as the mechanism through which authentic leadership influences engagement. We propose that perceived organisation support mediates the relationship between authentic leadership and engagement.

The following research objectives are suggested:

Objective 1: to determine the relationship between authentic leadership and work engagement found in other studies, can also be found in this particular dataset.

- H<sub>0</sub>1: There is no linear relationship between authentic leadership and work engagement
- H<sub>1</sub>1: There is a linear relationship between authentic leadership and work engagement

Objective 2: to determine whether POS has a mediating effect on the impact of authentic leadership on work engagement.

- H<sub>0</sub>2: POS has no mediating effect on the impact of authentic leadership on work engagement

- H<sub>12</sub>: POS has a mediating effect on the impact of authentic leadership on work engagement

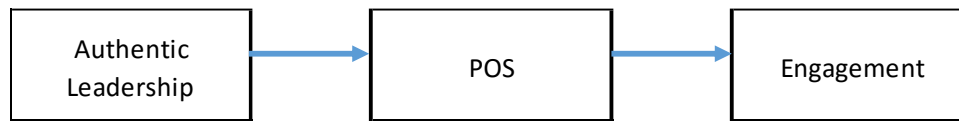


Figure 1: The mediating effect of Perceived Organisational Support on the relationship between authentic leadership and engagement

## 5.4 Methods

### 5.4.1 Sample and procedure

The data for this study was gathered at the South African headquarters based in Johannesburg of an international Information Technology company. All business units/divisions were included to ensure variance of responses, as the employees from a specific business unit may have similar or different levels of engagement depending on the level of authenticity of the business unit's leaders.

The data gathering was conducted electronically in the form of a self-administered questionnaire/survey. All employees were invited to take part in a survey that was sent out through an e-mail containing a hyperlink to a web-based survey tool. The employees were assured anonymity as the online survey was customised neither to track nor record email and IP addresses. From the sample of 595 employees, 202 questionnaires were completed, constituting a response rate of 34%. Deletion of missing values resulted in a usable sample of 162 employees. Data obtained from the questionnaire was analysed using SAS and AMOS statistical package software.

### 5.4.2 Measures

Apart from the demographical questions the survey contained questions from 3 standardised questionnaires as well as questions measuring leadership practices that is not a standardised questionnaire. The different Likert scales for these established questionnaires were kept unchanged.

#### 5.4.2.1 Authentic Leadership

*Authentic leadership* was measured using the Authentic Leadership Questionnaire (ALQ). The ALQ is the most frequently used measure of authentic leadership (Gardner et al., 2011). The ALQ is a 16-scale item that measures the four constructs of authentic leadership: *self-awareness* (four items), *relational transparency* (five items), *internalised moral perspective* (four items) and *balanced processing* (three items).

Avolio et al. (2009) defined the following sub constructs for authentic leadership:

Balanced processing refers to objectively analysing relevant data before making a decision. Internalized moral perspective refers to being guided by internal moral standards, which are used to self-regulate one's behaviour (Avolio et al., 2009). Relational transparency refers to presenting one's authentic self through openly sharing information and feelings as appropriate for situations (i.e., avoiding inappropriate displays of emotions). Self-awareness refers to the demonstrated understanding of a person's strengths, weaknesses, and the way an individual makes sense of the world (Avolio et al., 2009). The ALQ has a 5 point Likert scale ranging from 0-Not at all to 4-Frequently, if not always.

#### 5.4.2.2 Work Engagement

*Work engagement* was measured using the 9 item Utrecht Work Engagement Scale-UWES). This self-report questionnaire assesses work engagement, which includes items such as: "I am bursting with energy in my work" (vigour); "My job inspires me" (dedication); "I feel happy when I'm engrossed in my work" (absorption). The measure has been shown to have good internal consistency ( $\alpha = 0.85-0.92$ ; Schaufeli et al., 2006).

The UWES has a 7 point Likert scale ranging from 0-Never to 6-Always, every day.

#### 5.4.2.3 Perceived Organisational Support

POS was measured using the shorter scale of 8-item version of the POS survey (Eisenberger et al. 2002). A few of the sample items are: My organisation really cares about my well-being, my organisation strongly considers my goals and values. Dinç, (2015) found a Cronbach's alpha value of 0.85 for this short scale where all 8 items loaded on one factor and explained 56.91% of the variance (Esra Dinç, 2015).

The POS questionnaire has a 7 point Likert scale ranging from 0-Strongly Disagree to 6-Strongly Agree.

#### 5.4.2.4 Control Variables

In the analysis, the following control variables were added: gender, job tenure, level in organisation and size of group reporting to the manager/leader. According to Schaufeli & Salanova (2007) gender can be associated to feelings of engagement and managers tend to feel more confident in expressing themselves than non-managers (Kraus et al., 2011). We therefore controlled for gender (0=female; 1=male) and managerial position (0=do not have a managerial role; 1=have a managerial role at all levels).

#### 5.4.3 Reliability

The Cronbach alpha as measure was used to test the internal consistency or reliability of the different

sets of items. This measure is based on the correlations between different items on the same scale where an alpha of between 0.6 and 0.7 is regarded as acceptable reliability and 0.8 or higher indicated good reliability (Saunders et al., 2012). A reliable instrument (questionnaire) is one with scores on similar items to be internally consistent, but you still want each of the items to contribute unique information to the proposed construct (Saunders et al., 2012). The self-rating instruments used in this study have an established validity and reliability.

#### 5.4.4 Validity

To test for the validity of the measure of the variables in this study, factor analysis has been conducted. The results of the factor loading will be discussed in section 5.2 below.

#### 5.4.5 Data Analysis

Mediation adds value to and has been influential in building on theory using the conclusions of partial and full mediation. It suggests plausibility of additional mechanisms and provides an indication of the prominence of an intermediate variable in explaining the total effect (Rucker et al., 2011) of the mediating variable on the relationship between the independent and dependent variable.

The mediation model shows a casual sequence in which X affects Y indirectly through the mediator variable M. X is therefore postulated to affect M and this effect then propagates causally through Y (Hayes & Preacher, 2014). This indirect effect represents the mechanism by which X transmits its effect on Y. According to this model, X can also affect Y directly – the direct effect of X – independent of X's influence on M (Hayes & Preacher, 2014). Mediation analysis is used to quantify and examine the direct and indirect pathways through which a variable X transmits its effect on a consequent variable Y through one or more intermediary or mediator variables (Hayes & Scharkow, 2013).

Multiple regression was used to test the hypotheses. Hypothesis 1 stated that Authentic Leadership is positively related to Engagement (H1), Authentic Leadership is positively related to POS (H2) and POS mediates the relationship between authentic leadership and engagement (H3). We tested for mediation following the steps outlined by Baron & Kenny (1986). Within the framework of Baron and Kenny's (1986) four step approach, hierarchical regression analysis was applied to test the mediating effect of POS in the study. In order to refer to this mediating effect, four requirements have to be met. First of all, an independent variable is required to have an effect on a dependent variable. Second, independent variable is required to have an effect on mediator variable. Third, the mediator variable is required to have an effect on the dependent variable. Finally, when independent variable and mediator variable are added to the model, mediator variable is required to have a significant effect on dependent variable, and independent variable's effect on dependent variable has to lessen or totally disappear (E Dinç, 2015).

Fritz, Taylor, & Mackinnon (2012) suggest that the significance of *a* and *b* is examined individually in addition to the chosen test of the indirect effect. These authors advise that credence is provided to the test of indirect effect and vice versa when both these effects are significant.

## 5.5 Results

### 5.5.1 Demographical information

The survey was sent to the population of 595 employees, 202 questionnaires were completed, constituting a response rate of 34%. Forty of these responses were incomplete and deletion of missing values resulted in a usable sample of 162 employees.

*Table 2: Summary of demographical information*

	Frequency	Percent (%)
<b>Business Unit</b>		
Global Business Services (GBS)	74	36.63
Global Technology Services (GTS)	41	20.30
Integrated Operations	13	6.44
Sales and Distribution	33	16.34
Software Group	29	14.36
Systems and Technology Group	10	4.95
Real Estate Strategy and Operations (RESO)	2	0.99
<b>Tenure</b>		
<1	42	20.79
1-<3	45	22.28
3-<6	24	11.88
6-10	32	15.84
10>	59	29.21
<b>Gender</b>		
Female	82	40.59
Male	120	59.41
<b>Level in the Organisation</b>		
Executive	12	5.94
Business Unit Leader	7	3.47
Middle Management	20	9.90
People Manager	13	6.44
Specialist Role	96	47.52
CBD Program	9	4.46
LDC Program	45	22.28
<b>Size of group of reportees</b>		
No one report to me	142	71.36
1-<15	33	16.58
15>	24	12.06

Notes: n = 202

In their review of the literature on POS, Rhoades & Eisenberger (2002) has found that demographical characteristics (i.e. age, education, gender and tenure) has shown very little relationship with POS.

### 5.5.1.1 Gender

The sample comprised of 120 males (59.4%) and 82 females (41.6%). Table 2 below shows the mean scores for authentic leadership, work engagement and POS across gender. The authentic leadership, engagement and POS mean scores were all higher for the male respondents.

*Table 3: Mean scores across gender*

Gender	Number of respondents	Authentic Leadership	Work Engagement	Perceived Org Support
Female	82	3.66	5.25	4.40
Male	120	3.72	5.61	4.44

### 5.5.1.2 Business Units

Table 3 reflects the mean scores across business units and one department reflected higher scores across all three variables. There is one business unit that scored a higher score for Authentic Leadership than that of Global Business Services (GBS) division but overall the GBS division had the highest score across all 3 variables. The mean score levels for authentic leadership was a little higher for GBS and the Real Estate Strategy and Operations (RESO) division. For work engagement, the mean scores were higher for GBS and Sales and distribution and finally for POS the mean scores were higher for GBS and Software Group.

*Table 4: Mean scores across business units*

Business Units	Number of respondents	Authentic Leadership	Work Engagement	Perceived Org Support
Global Business Services	74	<b>3.92</b>	<b>5.75</b>	<b>4.68</b>
Global Technology Services	41	3.15	4.63	3.54
Integrated Operations	13	3.46	5.35	4.16
Sales & Distribution	33	3.65	<b>5.77</b>	4.45
Software Group	29	3.84	5.58	<b>4.84</b>
Systems and Technology Group	10	3.74	5.27	4.56
Real Estate Strategy and Operations	2	<b>4.09</b>	4.00	3.88

### 5.5.1.3 Tenure

The average tenure of respondents was 6.13 years. Approximately one third of the sample (29.21%)

have been with the company for more than 10 years. Interestingly the mean scores for authentic leadership, engagement and POS was higher for the group that have been at the company for less than a year. A little lower score was found for the group that has been with the company between 3 and 5 years but shows higher averages across all three (3) variables. Literature has found that engagement is inversely related to tenure (Xu & Thomas, 2011) and yet in their study Xu and Thomas (2011) found that tenure did not correlate positively with engagement.

*Table 5: Mean scores across tenure*

Tenure	Number of respondents	Authentic Leadership	Work Engagement	Perceived Org Support
Less than 1 year	42	<b>4.12</b>	<b>6.09</b>	<b>5.33</b>
1 to 2 years	45	3.68	5.49	4.34
3 to 5 years	24	<b>3.81</b>	<b>5.65</b>	<b>4.60</b>
6 to 9 years	32	3.40	4.98	3.84
10 and more years	59	3.47	5.16	3.98

#### 5.5.1.4 Level in the organisation

It is interesting to note that the executive level as well as the Leaner Development Centre (LDC) program level scored higher levels on all three variables. The respondents represented a range of levels in the organisation including executives (5.94%), business unit leaders (3.47%), middle managers (9.9%), people managers (6.44%), specialist role (47.52%) and special program incumbents (26.74%).

*Table 6: Mean scores across level in the organisation*

Level in organisation	Number of respondents	Authentic Leadership	Work Engagement	Perceived Org Support
Executive	12	<b>4.13</b>	<b>6.46</b>	<b>5.74</b>
Business unit leader	7	3.96	5.70	4.86
Middle management	20	3.54	5.62	4.30
People manager	13	3.82	5.59	4.58
Specialist role	96	3.43	4.96	3.80
CBD program	9	3.08	5.00	3.56
LDC program	45	<b>4.12</b>	<b>6.13</b>	<b>5.29</b>

#### 5.5.1.4 Descriptive statistics of full sample

The Cronbach's alpha results for these scales was measured to be 0.9608 (ALQ), 0.9309 (UWES) and 0.8805 (POS). These high alpha values relates to very high internal consistency between the items for each construct.

Table 7: Cronbach's alpha

Construct	Item	Authentic Leadership	Work Engagement	Perceived Organisational Support
Authentic Leadership	1	0.9585		
	2	0.9581		
	3	0.9578		
	4	0.9591		
	5	0.9613		
	6	0.9575		
	7	0.9588		
	8	0.9574		
	9	0.9577		
	10	0.9581		
	11	0.9587		
	12	0.9581		
	13	0.9587		
	14	0.9575		
	15	0.9573		
	16	0.9574		
Work Engagement	17		0.9193	
	18		0.9182	
	19		0.9145	
	20		0.9143	
	21		0.9202	
	22		0.9226	
	23		0.9258	
	24		0.9299	
	25		0.9381	
Perceived Organisational Support	26			0.8629
	27			0.8730
	28			0.8608
	29			0.8698
	30			0.8604
	31			0.8670
	32			0.8615
	33			0.8696
Sub Total		0.9608	0.9309	0.8805

Item analysis was conducted to investigate how the Cronbach alpha will be affected if one of the items for the specific construct and sub construct was removed. If the Cronbach improved significantly when an item is removed it would be advisable to remove the item from the construct. In all the analyses it was found that all the items are correctly identified in the construct and no item

needs to be removed from the construct. All the individual items were found to be highly correlated with the total (rule of thumb is that the correlation with the total should be 0.7 or higher). If any of the individual items were to be deleted from the analysis, the Cronbach alpha will actually decrease, therefore all the items should remain in the construct.

*Table 8: Descriptive statistics, correlation and scale reliabilities for main variables*

	<b>Cronbach Alpha</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>
1. Authentic Leadership	0.961	165	3.70	0.93	1		
2. Work Engagement	0.930	162	5.48	1.23	0.5089**	1	
3. Perceived Org Support	0.880	162	4.43	1.40	0.5927**	0.6018**	1

Notes: \*  $p < 0.05$  \*\*  $p < 0.01$  SD: Standard Deviation

*Table 9: Descriptive statistics, correlations and scale reliabilities for sub constructs*

	<b>Cronbach Alpha</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
1. Vigour	0.961	162	5.00	1.55	1							
2. Dedication	0.966	162	5.67	1.38	0.8352**	1						
3. Absorption	0.961	162	5.76	1.11	0.6512**	0.7209**	1					
4. Self-awareness	0.930	165	3.78	1.00	0.4564**	0.4100**	0.3093**	1				
5. Relational Transparency	0.880	165	3.72	0.96	0.4544**	0.3718**	0.3579**	0.8548**	1			
6. Processing Information	0.870	165	3.69	1.00	0.5496**	0.5003**	0.4041**	0.8008**	0.7925**	1		
7. Internalised Moral Perspective	0.908	165	3.55	1.07	0.4961**	0.4286**	0.3557**	0.7667**	0.7810**	0.8607**	1	
8. Perceived Org Support	0.880	162	4.43	1.40	0.5965**	0.5788**	0.4441**	0.5444**	0.5077**	0.5747**	0.5859**	1

Notes: \*  $p < 0.05$  \*\*  $p < 0.01$  SD: Standard Deviation

### 5.5.2 Factor Analysis

With factor analysis, we investigated whether respondents were able to distinguish among the sub constructs. Table 8 and 9 shows the Varimax rotation of the principal components solution for engagement and authentic leadership.

The principal component analysis provided us with further insight into the factors that provide and account for meaningful amounts of variance. The Varimax rotation was applied to the 9 items of the UWES engagement scale. The two factors explained 70.57% of the variance. Under the first factor, items indicate engagement characteristics. This factor incorporates all three of the vigour items, two of the dedication items and 1 of the absorption item (total of 6 out of the 9 items) and explain a total of 58.89% of the variance. The second factor of this scale contains 2 of the absorption items as well as 1 of the dedication items and together explains 11.68 of the variance. For the engagement construct it can be concluded that the sub-constructs of vigour and dedication provided meaningful variance as a single construct where absorption provided a separate construct loading.

*Table 10: Varimax rotation loadings for engagement*

Items	Factor 1	Factor 2
c - Dedication 1	0.90174	
d - Dedication 2	0.87091	
b - Vigor 2	0.86855	
a - Vigor 1	0.85336	
e - Vigor 3	0.83949	
f - Absorption 1	0.75022	
h - Absorption 2		0.87482
i - Absorption 3		0.85959
g - Dedication 3		0.65556
Eigenvalues	0.86387	0.50372
Percentage of explained variance	58.89	11.68
<b>Total variance:</b>	<b>70.57</b>	

The authentic leadership scale was also factor analysed with Varimax rotation. Interestingly the scale only loaded on 2 factors and explained 112.93% of the variance. The first factor explained 63.49% of the variance and included 3 items of the processing information sub construct, all 3 of the items of the internalised moral perspective construct, 2 of the self-awareness construct as well as 1 of the relational transparency construct. The second factor that explained 49.44% of the variance consisted of the remainder of the 4 relational transparency sub construct, 2 self-aware items as well as 1 of the processing information sub construct.

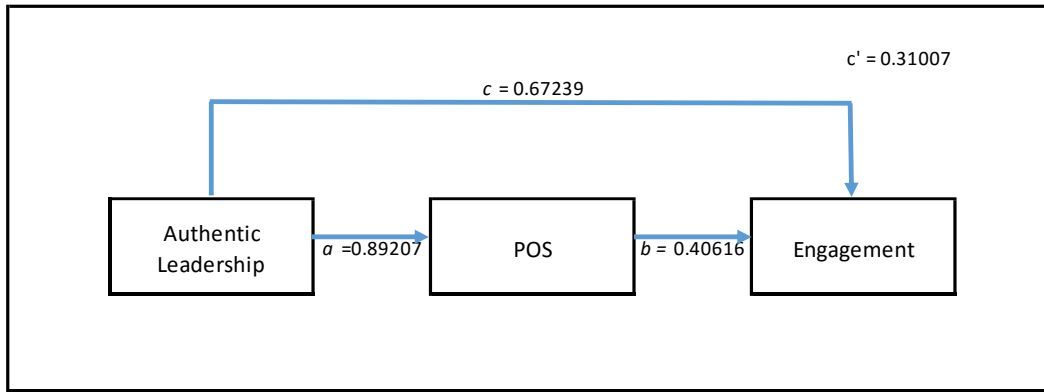
*Table 11: Varimax rotation loadings for authentic leadership*

Items	Factor 1	Factor 2
l - Processing Information	0.86849	
m - Processing Information	0.81258	
o - Internalised Moral Perspective	0.81097	
n - Internalised Moral Perspective	0.79457	
p - Internalised Moral Perspective	0.77095	
k - Processing Information	0.69593	
b - Self-awareness	0.65282	
c - Self-awareness	0.64606	
h - Relational Transparency	0.64373	
e - Relational Transparency		0.82563
d - Self-awareness		0.77222
a - Self-awareness		0.72692
g - Relational Transparency		0.72292
f - Relational Transparency		0.67600
i - Relational Transparency		0.64336
j - Processing Information		0.58178
Eigenvalues	0.76037	0.64949
Percentage of explained variance	63.49	49.44
<b>Total variance:</b>	<b>112.93</b>	

### 5.5.3 Test of Hypotheses

Results indicate that Authentic Leadership is significantly related to Engagement, thereby lending support for H1a, and satisfying the first condition for mediation. The results further reveal that POS is significantly related to Engagement, and that Authentic Leadership is significantly related to POS; therefore, H2 is supported, and the next two requirements of mediation have been met. Finally, when both the independent (Authentic Leadership) and mediator (POS) variables are put into the model together, both remain significant, indicating partial mediation.

$$\text{Indirect effect 1} = c - c' = 0.67239 - 0.31007 = 0.362323$$



Morera & Castro (2013) encourages researchers to report measures of effect sizes as opposed to full or partial mediation. Supplementary to the Judd and Kenny approach, the Sobel approach or test was therefore used to confirm the Judd and Kenny results (Hayes, 2009). In order to assess mediation through the Sobel approach, the direct  $ab$  cross product should be tested (Morera & Castro, 2013). According to Fritz & Mackinnon, (2015) the Sobel first-order test is a widespread product-of-coefficients test that assesses mediation.

The  $ab$  cross product has been used. The same result of 0.362323 for the indirect effect was found. Indirect effect  $2 = b (a) = 0.40616 (0.892) = 0.362323$

According to Hayes, (2009) Sobel does have a flaw in the method as it contains the assumption of a normal sampling distribution of the indirect effect and according to Morera & Castro (2013) this assumption is not reasonable in smaller samples. A further step is therefore needed as confirmation where normality of the sample distribution is not assumed. Two tests proposed by Hayes (2009) are the Bootstrapping and M-test method. The M-test method necessitates cumbersome tables as well as supplementary assumptions to the bootstrapping method (Hayes, 2009) and bootstrapping was therefore chosen as the preferred method. Bootstrapping also doesn't make any assumptions regarding the shape of the sampling distribution of the indirect effect but rather base the inference on an estimate of the indirect effect itself (Hayes, 2009). According to Morera & Castro (2013) the distribution-free resampling method called bootstrapping allows a sampling distribution estimation of a statistic. This sampling procedure forms samples with the replacement from the original sample and repeats 9999 times to form 10 000  $ab$  cross products (Morera & Castro, 2013)

Koopman, Howe, Hollenbeck, & Sin (2015) contests the use of bootstrapping for use in smaller samples of 20 – 80 cases. These authors propose alternatives to bootstrapping as established resampling techniques i.e. Permutation and Bayesian methods. The current study however has a bigger sample and double the size of 80 which is considered small according to these authors and

bootstrapping was therefore used.

Table 12: Results for hierarchical regression analysis.

Criterion Variables	
<b>Predictors</b>	<b>Engagement</b>
<i>Step 1</i>	
Authentic Leadership	0.672**
Adjusted R <sup>2</sup>	0.254
F statistic	55.92
<b>POS</b>	
<i>Step 2</i>	
Authentic Leadership	0.892**
Adjusted R <sup>2</sup>	0.347
F statistic	86.63
<b>Engagement</b>	
<i>Step 3</i>	
POS	0.528**
Adjusted R <sup>2</sup>	0.358
F statistic	90.84
<b>Engagement</b>	
<i>Step 4</i>	
Authentic Leadership	0.310*
POS	0.406**
Adjusted R <sup>2</sup>	0.390
F statistic	52.53

Notes: n = 162, \* p < 0.0025, \*\* p < 0.01

In order to determine whether the indirect effect (of 0.362323) is significant we therefore make use of the Bootstrap samples (as they do not assume normal distribution of the sample) to determine the standard error of the indirect effect.

Path analysis is one of the techniques developed to assist social scientists with analysis of relationships amongst multiple variables and is a variation of multiple-regression (Stage et al., 2004). Path analysis was thus used as the bootstrap intervals are obtained from this approach and also provides a number of fit indices to assess the overall proposed model.

Table 13: Regression estimates for proposed model of research

<b>Fitness Indices</b>	<b>Estimate</b>	<b>S.E.</b>	<b>C.R.</b>	<b>P</b>
POS <--- Authentic Leadership	0.892	0.085	10.486	***
Engagement <-- - POS	0.406	0.079	5.154	***
Engagement <-- - Authentic Leadership	0.310	0.110	2.81	0.005

Notes: C.R. > +/- 2.58 test significance of estimate at  $p < 0.01$

\*\*\* Significance less than 0.001

The level of significance in table 12 is based on the critical ratio (CR) of the regression estimate. In the case where CR values are greater of equal to 2.58, a 99 % level of significance is indicated.

#### 5.5.4 Model Fit Analysis

The model was tested to determine how well the model fit the data. There are established rules of thumb that is used to understand whether a model fits the data. The criteria for a good fit and acceptable fit in table 12 below, was retrieved from (Schermelleh-Engel et al., 2003).

The goodness of fit index (GFI), comparative (CFI) and normed fit index (NFI), values greater than 0.95 represent a good model fit. For the root mean square error of approximation (RMSEA) a value less than 0.05 is considered a good fit and less than 0.08 is an adequate fit. Considering the RMSEA there is slight room for improvement but the other indices indicate a good fit.

Table 14: Fit Indices for Proposed Model of Research

	Fitness Indices	Established Rules & Criteria		Proposed Model	
		Good Fit	Acceptable Fit	Measure of Index	Remarks
1	Chi Square value	$0 \leq \chi^2 \leq 2df$	$2df < \chi^2 \leq 3df$	5.527	Accept the model
	p-value	$0.05 < p \leq 2df$	$0.05 \leq p \leq 2df$	0.063	
2	Normed Fit Index (NFI)	$.95 \leq NFI \leq 1.00$	$.90 \leq NFI < .95$	0.963	Good Fit
3	CMIN/DF	$< 2^a$	$< 5^b$	2.763	Good Fit
4	Root Mean Square Residual (RMR)	$< 0.05^a$	$< 0.08^b$	0.117	Room for improvement
5	Comparative Fit Index (CFI)	$.97 \leq CFI \leq 1.00$	$.95 \leq CFI < .97$	0.976	Good Fit
6	Incremental Fit Index (IFI)	$1 < IFI < 1$	$1 < IFI < 1$	0.976	Acceptable
7	Relative Fit Index (RFI)	$> 0.90^a$	$> 0.90^a$	0.945	Good Fit
8	Goodness of Fit Index (GFI)	$.95 \leq GFI \leq 1.00$	$.90 \leq GFI < .95$	0.977	Good Fit
9	Adjusted Goodness of Fit Index (AGFI)	$.90 \leq AGFI \leq 1.00$	$.85 \leq AGFI < .90$	0.931	Good Fit
10	Tucker-Lewis Index (TLI)	$> 0.90^a$	$> 0.90^a$	0.964	Good Fit
11	Root Mean Square of Approximation (RMSEA)	$< 0.05^a$	$< 0.08^b$	0.105	Room for improvement

## 5.6 Discussion

This section of the document is dedicated to the discussion of the results of the specific objectives and underlying hypotheses as explained in section 3 of this document.

Objective 1: to determine the relationship between authentic leadership and work engagement found in other studies, can also be found in this particular dataset.

- $H_01$ : There is no linear relationship between authentic leadership and work engagement
- $H_11$ : There a linear relationship between authentic leadership and work engagement

The null hypothesis for objective 1 can be rejected and therefore the alternate hypothesis was confirmed by the results of the analysis of this specific sample group. The results showed a statistically significant positive correlation coefficient of 0.6723 with a 0.0001 p-value between authentic leadership and work engagement.

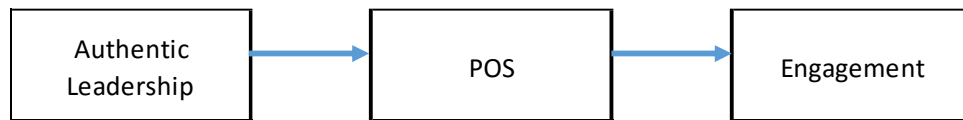
The results of this study supports the literature findings of a positive correlation between authentic leadership and engagement (Azanza et al., 2013; Elstob & Scheepers, 2014; Shu, 2015; Wang & Hsieh, 2013).

Given the positive correlation between authentic leadership and engagement, companies will benefit from fostering and developing authentic leaders within the organisation. Giallonardo, Wong & Iwasiw (2010) have found that the employee first identifies with the leader which in turn enhances identification with the work group. This positive relationship in turn fosters trust in the leader. When

organisation develop authentic leaders with whom employees can identify and build trust with, employees are more likely to be engaged in the workplace. An engaged workforce in turn leads to positive outcomes for the organisation where the benefits of engagement can be maximised (Alfes et al., 2013).

Objective 2: to determine whether POS (POS) has a mediating effect on the impact of authentic leadership on work engagement.

- H<sub>0</sub>2: POS has no mediating effect on the impact of authentic leadership on work engagement
- H<sub>1</sub>2: POS has a mediating effect on the impact of authentic leadership on work engagement



The results for objective 2 of this study concluded that the null hypothesis can be rejected and the alternate hypothesis was therefore confirmed. These results were based on the mediator regression model where, based on the Cronbach alphas, the three main constructs were confirmed and used in the regression. The total effect of authentic leadership on engagement measured by the parameter estimate was 0.67239 at a significance level of 0.0001. The total effect of authentic leadership on POS was measured by the parameter estimate as 0.89207 also at a significance level of 0.001. The total effect of POS on engagement was also found to be significant at 0.0001 level with a coefficient of 0.52825. Based on the significant relationships of all three these models, the forth mode was also tested controlling for authentic leadership. Authentic leadership was found to be still significant when controlling for POS. It could therefore be concluded that the findings supported partial mediation through the mediator POS.

The findings of this research objective confirms that authentic leaders will be enabled to establish higher levels of engagement when employees perceive the organisation to have positive levels of collaboration and support. Individuals are encouraged intrinsically to exert increased levels of effort (Biswas & Bhatnagar, 2013) when they perceive the organisation as supportive. Thus, when the context of authentic leadership exists and employees experience a supportive environment within the organisation, higher levels of engagement is more likely.

Objective 3: to determine if significant intercorrelations exist between the subcontracts of authentic leadership and work engagement.

The correlations of the subcontracts were investigated to see whether stronger correlations exist between subcontracts. All these sub constructs were strongly correlated at the 0.0001 level.

The results of this study provides us with a deeper understanding of the role of POS in the context of organisations within the world of work today where authentic leadership assist with identification with others in the work group or increased work engagement (Farndale & Murrer, 2015). In this study it was concluded that POS partially mediates the relationship between authentic leadership and engagement.

Through making a distinction between full and partial mediation, theory can be influentially tested and social psychological knowledge can be further developed (Rucker et al., 2011). When mediation model with one mediator is tested for, full mediation proposes that a researcher has completely explained the process by which the independent variable X influences the dependent variable Y and there is no need to test for further indirect effects. In the case of partial mediation, like we have found in this study, there is a clear implication that other indirect effects can be examined and tested empirically (Rucker et al., 2011).

In the case of POS and the effect it has on the relationship between authentic leadership and engagement we have found partial mediation. As expected POS is not the only mediating factor for this relationship but more importantly the influence as a mediating variable has been confirmed and

As predicted by Rhoades & Eisenberger (2002), this study has found that demographical characteristics of gender and tenure had very little relationship with POS.

However, those who report low levels of engagement with their work do not benefit to the same extent from POS. This means that managers need to first focus on increasing a person's engagement with their job, and then supplement this with a supportive environment (Alfes et al, 2013).

## **5.7 Conclusion**

### **5.7.1 Principal Findings**

As Fusco, Riordan, & Palmer (2015) declared, authentic leadership may very well be the leadership theory relevant to our time given the relevance to the complex environment where engagement of employees are challenged (Day et al., 2014). This study has shown that the relationship between authentic leadership is rather multifaceted and as proven by the partial mediation, not only one factor influences the conditions under which engagement can be strengthened. The partial mediation result

does however confirm that authentic leaders are more able to influence the engagement of employees when employees perceive their organisation as being supportive. The conclusions of our study validates the findings of (Kurtessis et al., 2015) that employees feel more content and engaged in their role when they experience and perceive leaders and the organisation as supportive. POS therefore provide favourable conditions under which authentic leadership can positively influence the engagement levels of followers. Other authors (Rhoades & Eisenberger, 2002; Sihag & Sarikwal, 2015; Elstob & Scheepers, 2015) have investigated different factors in relation to POS. Our study supports their findings that suggest additional variables that serve and underpin the relationship between leadership and engagement.

### 5.7.2 Implications for Management

The practical implications of this study relates to leadership and engagement levels for organisations. The results showed that it is beneficial for leaders to develop authentic leadership skills to improve levels of engagement within organisation through the POS that employee's experience. Erkutlu, (2013) also stated that it is essential to consider the key organisational factors which facilitates authentic leadership development through strong support from senior management (being role models and providing resources) as well as incorporating authentic leadership metrics in performance evaluations and metrics.

### 5.7.3 Limitations of the Research

This study makes a contribution as it examines the relationship between variables that have not been well studied in this specific relationship before, and thus anticipate to inspire further research and new practical applications. This study also provides further information on the reliability and validity of the ALQ instrument that encourages future use.

The sample size was small and was restricted to one company and its specific industry. The findings is therefore limited for use as a guide for other companies within the same industry and cannot be generalised to all companies and industries. Another implication of the sample size is that we have found a large effect for  $a$  and Fritz et al. (2012) suggests that when you have a large effect for  $a$ , researchers may need to overpower their studies (for example in terms of an increased sample size) to counteract the statistical power of mediation that may be less than expected due to the large effect of  $a$ .

Due to the time constraints of the research conducted as a cross-sectional study, it was not able to provide the depth of analysis of a longitudinal study.

The research was focused on authentic leadership and will not provide an analysis of the impact of the different leadership styles.

#### **5.7.4 Suggestions for Future Research**

Saks & Gruman (2014) suggests that an engagement measure that is more distinct from other constructs should be developed. Future research can re-look the specific measure of engagement, something that was outside the scope of this specific research. Future research may want to consider refining the measures of engagement and investigate the other scales that may already exist but may need refinement (Saks & Gruman, 2014).

With organisational inclusion being of specific relevance in a diverse country like South Africa and according to Cottrill et al. (2014), organisational inclusion being a new topic in organisational research, it would be relevant to study and understand how specific leadership competencies like authenticity influences (possible antecedent of inclusion) influences a possible outcome of inclusion,

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## 6. Appendices

### Appendix A: Survey Example

#### Introduction

Dear Colleague,

I am doing research on leadership, perceived organizational support, leadership levels and engagement. To that end, I would really appreciate it if you could please complete a survey about these constructs. This should not take more than 10 minutes of your time. Your participation is voluntary and you can withdraw at any time.

All data will be kept confidential and by completing this survey, you indicate that you voluntarily participate in this research. If you have any concerns, please contact me or my supervisor. Our details are provided below.

Researcher name: Theresa Vermeulen  
E-mail: vermeule@za.ibm.com  
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Research Supervisor Name: Dr Caren Scheepers  
E-mail: scheepersc@gibs.co.za  
Phone: 011 771 4331

\* 1. Which business unit are you in?

- Global Business Services (GBS)
- Global Technology Services (GTS)
- Integrated Operations
- Sales and Distribution
- Software Group
- Systems and Technology Group
- Real Estate Strategy and Operations (RESO)

\* 2. How many years have you been working for IBM?

\* 3. What is your gender?

- Female
- Male

\* 4. What is your level in the organization?

- Executive
- Business Unit Leader
- Middle Management
- People Manager
- Specialist Role
- CBD Program
- LDC Program

5. Size of group reporting to you?

(Please indicate 0 you have no employees reporting to you)

Q6&7: Adapted from O'Reilly et al, 2009

Q8: Copyright 2007 Authentic Leadership Questionnaire (ALQ) by Bruce J. Avolio, William L. Gardner, & Fred O. Walumbwa. All rights reserved in all medium. Published by Mind Garden, Inc. [www.mindgarden.com](http://www.mindgarden.com)

\* 6.

The following statements refer to the practices of Senior Management (i.e. Service Line Lead); consider the extent to which you agree with the statement

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Moderately Agree	Strongly Agree
Clearly articulates the strategy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provides a compelling vision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provides measurable objectives for implementing the vision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognises progress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rewards progress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Responds effectively to resistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personally inspire and motivate the team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 7.

The following statements refer to the practices of **Middle Managers (i.e. People Manager)**; consider the extent to which you agree with the statement

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
Clearly articulates the strategy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provides a compelling vision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provides measurable objectives for implementing the vision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recognises progress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rewards progress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Responds effectively to resistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personally inspires and motivates the team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 8.

The following items refer to your leader's style, as you perceive it. Judge how frequently each statement fits his or her leadership style:

	Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
Statement not disclosed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statement not disclosed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourages everyone to speak their mind	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statement not disclosed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Displays emotions exactly in line with feelings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statement not disclosed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Makes decisions based on his or her core values	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statement not disclosed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3

	Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
Statement not disclosed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statement not disclosed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statement not disclosed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statement not disclosed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statement not disclosed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statement not disclosed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statement not disclosed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statement not disclosed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9: UWES Copyright Schaufeli & Bakker (2003)  
Q10: POS Questionnaire Copyright University of Delaware (1984)

\* As per the conditions of administering the authentic leadership questionnaire, only three sample items of the questionnaire are permitted to be reproduced in a thesis or dissertation (Mind Garden, Inc., 2014).

## Appendix B: Reference Evaluation

Authors	Year	Article Title	Journal Name	Ranking	Citation
Albrecht, S. L., Bakker, A. B., Gruman, J. A., Macey, W. H., Saks, A. M., & Albrecht, S. L.	2015	Employee engagement , human resource management practices and competitive advantage An integrated approach.	Journal of Organizational Effectiveness: People and Performance, 2(1), 7–35.		24
Alfes, K., Shantz, A. D., Truss, C., & Soane, E. C.	2013	The link between perceived human resource management practices , engagement and employee behaviour : a moderated mediation model	International Journal of Human Resource management, 24(2), 330–351.	3	149
Algera, P. M., & Lips-Wiersma, M.	2012	Radical Authentic Leadership: Co-creating the conditions under which all members of the organization can be authentic.	Leadership Quarterly, 23(1), 118–131.	4	83
Anitha, J.	2014	Determinants of employee engagement and their impact on employee performance.	International Journal of Productivity and Performance Management, 63(3), 308–323.	1	75
Avolio, B., & Gardner, W. L.	2005	Authentic leadership development : Getting to the root of positive forms of leadership	16, 315–338.	4	2137
Avolio, B., Walumbwa, F., & Weber, T.	2009	Leadership: Current Theories, Research, and Future Directions.	Annual Review of Psychology, 60(1), 421–449.	4	1482
Azanza, G., Moriano, J. A., & Melero, F.	2013		Journal of Work and Organizational Psychology, 29(2), 45–50.	3	52
Baron, L.	2016	Authentic leadership and mindfulness development through action learning.	Journal of Managerial Psychology, 31(1), 296–311.	3	1
Beddoes-Jones, F., & Swailes, S.	2015	Strategic HR Review Authentic leadership: development of a new three pillar model.	Strategic HR Review, 14(3), 94–99.		1
Bryman, A., & Bell, E.	2015	Business Research Methods (Fourth Ed).	Oxford: Oxford University Press.	n/a	9132
Chaurasia, S., & Shukla, A.	2013	The Influence of Leader-Member Exchange Relations on Employee Engagement and Work Role Performance.	International Journal of Organization Theory and Behavior, 16(4), 465–493.		2
Chen, Z., Eisenberger, R., Johnson, K. M., Sucharski, I. L.	2009	Perceived Organizational Support and Extra-Role Performance : Which Leads to Which ?	The Journal of Social Psychology, 149(1), 119–124.	1	
Cooper, C. D., Scandura, T. A., & Schriesheim, C. A.	2005	Looking forward but learning from our past: Potential challenges to developing authentic leadership theory and authentic leaders.	Leadership Quarterly, 16(3), 475–493.	4	347
Crawford, E. R., Lepine, J. A., & Rich, B. L.	2010	Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test.	Journal of Applied Psychology, 95(5), 834–848.	4	671
Dawley, D. D., Virginia, W., Andrews, M. C., Carolina, N., Bucklew, N. S., & Virginia, W.	2008	Mentoring , supervisor support, and perceived organizational support : what matters most ?	Leadership & Organisation Development Journal, 29(3), 235–247.	1	121
Day, D. V., & Harrison, M. M.	2007	A multilevel, identity-based approach to leadership development.	Human Resource Management Review, 17(4), 360–373.	3	254
Day, D. V., Fleener, J. W., Sturm, R. E., & Mckee, R. A.	2014	Advances in leader and leadership development : A review of 25 years of research and theory.	The Leadership Quarterly, 25, 63–82.	4	140
Dechurch, L. A., Hiller, N. J., Murase, T., Doty, D., & Salas, E.	2010	Leadership across levels : Levels of leaders and their levels of impact.	The Leadership Quarterly, 21(6), 1069–1085.	4	85
Deloitte.	2015	Global human capital trends 2015.	Deloitte University Press.	n/a	0
Dimitrov, D.	2015	Leadership in a humane organization.	European Journal of Training and Development.		
Dinç, E.	2015	Perceived Organizational Support as a Mediator of the Relationship between Effort-Reward Fairness , Affective Commitment , and Intention to Leave.	International Business Research, 8(4), 259–269.		
Eagly, A. H.	2005	Achieving relational authenticity in leadership: Does gender matter?	Leadership Quarterly, 16(3), 459–474.	4	347
Edwards, G., & Gill, R.	2012	Transformational leadership across hierarchical levels in UK manufacturing organizations.	Leadership & Organization Development Journal, 33(1), 25–50.	1	30
Farndale, E., & Murrer, I.	2015	Job resources and employee engagement : a cross-national study.	Journal of Managerial Psychology, 30(5), 610–626.	3	2
Fritz, M. S., Taylor, A. B., & Mackinnon, D. P.	2012	Explanation of Two Anomalous Results in Statistical Mediation Analysis.	Multivariate Behavioral Research		105
Fusco, T., O Riordan, S., & Palmer, S.	2015	Authentic Leaders are... conscious, competent, confident, and congruent: A Grounded Theory of Group Coaching and Authentic Leadership Development.	International Coaching Psychology Review, 10(2), 131–148.	?	13
Gardner, W. L., Coglisier, C. C., Davis, K. M., & Dickens, M. P.	2011	Authentic leadership: A review of the literature and research agenda.	Leadership Quarterly, 22(6), 1120–1145.	4	355
Gatling, A., Jung, H., Kang, A., & Kim, J. S.	2016		Leadership & Organisation Development Journal, 37(2), 181–199.	1	1
Gavin, J. H., Cooper, C. L., Campbell Quick, J., & Quick, J. D.	2003	A spirit of personal integrity: The role of character in executive health.	Organizational Dynamics, 32(2), 165–179.	2	30
George, B., Sims, P., Mclean, A. N., & Mayer, D.	2007	Discovering Your Authentic Leadership Discovering Your Authentic Leadership.	, 129–138.	?	
Giallonardo, L. M., Wong, C. A., & Iwasiw, C. L.	2010	Authentic leadership of preceptors: Predictor of new graduate nurses' work engagement and job satisfaction.	Journal of Nursing Management, 18(8), 993–1003.	?	176
Hayes, A.	2013	Introduction to mediation, moderation, and conditional process analysis.	New York, NY: Guilford. New York: The Guilford Press.	n/a	5876
Jiang, H., & Men, R. L.	2015	Creating an Engaged Workforce: The Impact of Authentic Leadership, Transparent Organizational Communication, and Work-Life Enrichment.	Communication Research, 1–19.	?	0
Kurtessis, J. N., Eisenberger, R., Ford, M. T., Buffardi, L. C., Stewart, K. A., & Adis, C. S.	2015	Perceived Organizational Support : A Meta-Analytic Evaluation of Organizational Support Theory.	Journal of Management, 1–31.	4	30
Leavy, B.	2016	Effective leadership today – character not just Authentic Leadership, Authentic Followership, Basic Need	Strategy & Leadership, 44(1), 20–29.	?	0
Leroy, H., Anseel, F., Gardner, W. L., & Sels, L.	2012	Satisfaction, and Work Role Performance: A Cross-Level Study.	Journal of Management, 41(6), 1–21.	4	58
Luthans, F., Luthans, K. W., & Luthans, B. C.	2004	Positive psychological capital : Beyond human and social capital.	Business Horizons, 47(1), 45–50.	2	822

Mahon, E. G., Taylor, S. N., & Boyatzis, R. E.	2014	Antecedents of organizational engagement: Exploring vision, mood and perceived organizational support with emotional intelligence as a moderator.	Frontiers in Psychology, 5(NOV), 1–12.	?	13
Markos, S., & Sridevi, S.	2010	Employee Engagement : The Key to Improving Performance.	International Journal of Business and Management, 5(12), 89–96.	?	262
Matthews, R. a, Mills, M. J., Trout, R. C., & English, L.	2014	Family-supportive supervisor behaviors, work engagement, and subjective well-being: a contextually dependent mediated process.	Journal of Occupational Health Psychology, 19(2), 168–81.	4	19
McKergow, M.	2015	Develop authentic leadership – be a good host approaching leadership in a new way using the familiar techniques of hosting.	Strategic HR Review, 14(3), 85–88.		0
Merry, J.	2014	Aon Hewitt’s 2013 trends in global engagement: where do organizations need to focus attention?	Strategic HR Review, 13(1), 24–31.		4
Mills, M. J., Fleck, C. R., & Kozikowski, A.	2013	Positive psychology at work : A conceptual review , state-of-practice assessment , and a look ahead ahead.	The Journal of Positive Psychology, 8, 153–164.	1	45
Murthy, V., & Murthy, A.	2014	Adaptive leadership responses.	World Journal of Entrepreneurship, Management and Sustainable Development, 10(3), 162–176.	1	0
O’Reilly, C. A., Caldwell, D. F., Chatman, J. A., Lapidz, M., & Self, W.	2010	How leadership matters: The effects of leaders’ alignment on strategy implementation.	Leadership Quarterly, 21(1), 104–113.	4	127
Parker, S. K., & Griffin, M. a.	2011	Understanding active psychological states: Embedding engagement in a wider nomological net and closer attention to performance.	European Journal of Work and Organizational Psychology, 20(1), 60–67.	3	63
Rhoades, L., & Eisenberger, R.	2002	Perceived organizational support: A review of the literature.	Journal of Applied Psychology, 87(4), 698–714.	4	3962
Rich, B. L., Lepine, J. a, & Crawford, E. R.	2010	Job Engagement: antecedents and effects on job performance.	Academy of Management Journal, 53(3), 617–635.		988
Robertson, I. T., & Cooper, C. L.	2010	Full engagement: the integration of employee engagement and psychological well-being.	Leadership & Organization Development Journal, 31(4),	1	107
Saboe, K. N., Taing, M. U., Way, J. D., & Johnson, R. E.	2015	Examining the Unique Mediators That Underlie the Effects of Different Dimensions of Transformational Leadership.	Journal of Leadership & Organizational Studies, 22, 175–186.	?	1
Saks, A., & Gruman, J. .	2014	What Do We Really Know About Employee Engagement.	Human Resource Development Quarterly, 2(25), 155–182.	2	50
Saks, A. M.	2006	Antecedents and consequences of employee engagement.	Journal Managerial Psychology, 21(7), 600–619.	3	1976
Schaufeli, W. B.	2015	Engaging leadership in the job demands-resources model.	Career Development International, 20(5), 446–463.		5
Schriesheim, C. a., Castro, S. L., Zhou, X. (Tracy), & Yammarino, F. J.	2001	The folly of theorizing “A” but testing “B.”	The Leadership Quarterly, 12(4), 515–551.	4	150
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Notes: 63.5% of references published 2011 onwards

## Appendix C: Ethical Clearance Approval

Dear Miss Theresa Vermeulen

Protocol Number: **Temp2016-01311**

**Title: Investigating mediating and moderating variables, perceived organisational support and leadership level on the impact of authentic leadership on work engagement.**

Please be advised that your application for Ethical Clearance has been APPROVED.

You are therefore allowed to continue collecting your data.

We wish you everything of the best for the rest of the project.

Kind Regards,

Adele Bekker

## Appendix D: Turnitin Report

# Article for Submission 6 Nov

## 7pm

*by* Theresa Vermeulen

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FILE	ARTICLE_JOURNAL_FORMAT_6NOV16_7PMDOC.DOCX (137.91K)		
TIME SUBMITTED	06-NOV-2016 08:38PM	WORD COUNT	11690
SUBMISSION ID	671203760	CHARACTER COUNT	71744

## Investigating the Mediating Effect of Perceived Organisational Support on the Relationship between Authentic Leadership and Work Engagement

Using positive psychology and the theory of organisational support and reciprocity, we examined whether perceived organisational support (POS) mediates the relationship between authentic leadership and engagement. Authentic leadership and engagement has been investigated in the literature before however not in relation to POS within the same study. There is a need to understand more fully whether leaders influence engagement individually and whether it is a function of other factors that increase levels of engagement in the workplace. Data was collected from 202 employees, working in an international information technology organisation and results were analysed at the group level. Regression analysis was used to test for mediation, followed by statistical tests of the indirect effect as well as bootstrapping. Differences between subgroups were also investigated and model fit analysis to establish whether the suggested model was a good fit. The results have implications for leaders to influence the perceptions of employees toward organisational support in order to ultimately shape and improve their own influence on engagement in the organisation. Further practical implications of the findings are discussed, together with limitations and ideas for future research.

**23**  
**Investigating the Mediating Effect of Perceived Organisational  
Support on the Relationship between Authentic Leadership and  
Work Engagement**

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## Investigating the Mediating Effect of Perceived Organisational Support on the Relationship between Authentic Leadership and Work Engagement

Using positive psychology and the theory of organisational support and reciprocity, we examined whether perceived organisational support (POS) mediates the relationship between authentic leadership and engagement. Authentic leadership and engagement has been investigated in the literature before however not in relation to POS within the same study. There is a need to understand more fully whether leaders influence engagement individually and whether it is a function of other factors that increase levels of engagement in the workplace. Data was collected from 202 employees, working in an international information technology organisation and results were analysed at the group level. Regression analysis was used to test for mediation, followed by statistical tests of the indirect effect as well as bootstrapping. Differences between subgroups were also investigated and model fit analysis to establish whether the suggested model was a good fit. The results have implications for leaders to influence the perceptions of employees toward organisational support in order to ultimately shape and improve their own influence on engagement in the organisation. Further practical implications of the findings are discussed, together with limitations and ideas for future research.

## **Investigating the Mediating Effect of Perceived Organisational Support on the Relationship between Authentic Leadership and Work Engagement**

Across the world, leaders and managers have acknowledged that a key component of the organisation's effectiveness and competitiveness is employee engagement (Welch, 2011) and the argument is that successful organisations in contemporary business environments are those that engage their people. As the <sup>88</sup>twentieth century progressed, it became increasingly clear that engagement was what really counted (McKergow, 2015). Organisations where high levels of engagement persist are profiting in more than one area but specifically benefit in terms of business performance (Merry, 2014). Engaged employees demonstrate business awareness and willingness to devote extra time and effort for the accomplishment of organisational goals (Matthews, Mills, Trout, & English, 2014).

Today's working environment is constrained by resources (Merry, 2014) and apart from the employee engagement challenge, companies are also faced with corporate and ethical governance (Beddoes-Jones & Swales, 2015) challenges. In response to ethical matters, leadership knowledge and theory has experienced an increase in Authentic Leadership literature specifically (Algera & Lips-Wiersma, 2012). An emergent body of research has unmistakably demonstrated the benefits of Authentic Leadership for the organisation, as well as factors such as work engagement, overall company performance and productivity (Matthews et al., 2014).

Azanza, Moriano, & Melero (2013) argues that the present context of financial crisis, uncertainty and employment concerns that organisations are faced with, is threatening work engagement resulting in a call for leaders who are able to motivate valuable resources. According to Alfes, Shantz, Truss, & Soane (2013) it is critical that the wider organisation creates a positive climate and environment where employees experience a willingness to transform their levels of engagement into even more positive behaviours. In order to take full advantage of engagement and its benefits, a positive relationship with the organisation is needed (Alfes et al., 2013).

Trepidations concerning leadership are no longer related to the "right" leadership theory or model, but has rather transitioned into a question of how to effectively and efficiently develop leadership who accepts the challenge of creating this organisation climate where engagement can be maximised. Considering these challenges and contexts of organisations today, leadership and engagement are important constructs to be investigated where a myriad of unanswered (and even undiscovered) questions exist to pursue (Day, Fleenor, Sturm, & Mekec, 2014).

Even though many articles portray engagement as the responsibility of leaders to create engagement, not many researchers have conducted investigations on the relationship between leadership and engagement (Hansen, Byrne, & Kiersch, 2014). Given the positive relationship of Authentic leadership with engagement (further discussed in the literature review), the researchers are not only interested in the relationship between leadership and engagement but would also to investigate the effect of mediating variables on this

relationship? Previous work suggests that further research is needed on how authentic leadership relate to work engagement (Leroy, Ansel, Gardner, & Sels, 2012).

Shantz & Alfes (2016) postulated that an organisation-related resource (e.g. POS) may be able to compensate for lower engagement levels denoted by the exhaustion of a job-related resource of energy (e.g., engagement). The study by Shantz & Alfes (2016) established that lower levels of employee engagement can be compensated for by POS. The authors of the current study are interested in how POS is related to work engagement and leadership, as it has been found that organisations are able to create appropriate conditions to stimulate engagement. This study aims to contribute to the integration of these areas of research (leadership and engagement) and more specifically examine authentic leadership, employee engagement and POS which explains the relationship amid these variables.

## 2. Theoretical background

Traditional leadership theories and models have become insufficient as the context of leadership has become more complex and has expanded (Kutz & Bamford-Wade, 2013). It is for this reason that the complexities around leadership is investigated further. In this theoretical review of the study we would like to review the literature to investigate POS, Authentic Leadership and engagement to see how the complexities around these constructs overlap and influence each other.

## Appendix E: Tables in Word Format

**Table: Summary of demographic variables.**

	Frequency	Percent
<b>Business Unit</b>		
Global Business Services (GBS)	74	36.63
Global Technology Services (GTS)	41	20.30
Integrated Operations	13	6.44
Sales and Distribution	33	16.34
Software Group	29	14.36
Systems and Technology Group	10	4.95
Real Estate Strategy and Operations (RESO)	2	0.99
<b>Tenure</b>		
< 1	42	20.79
1- <3	45	22.28
3- <6	24	11.88
6-10	32	15.84
> 10	59	29.21
<b>Gender</b>		
Female	82	40.59
Male	120	59.41
<b>Level in the Organisation</b>		
Executive	12	5.94
Business Unit Leader	7	3.47
Middle Management	20	9.90
People Manager	13	6.44
Specialist Role	96	47.52
CBD Program	9	4.46
LDC Program	45	22.28
<b>Size of group of reportees</b>		
No one reports to me	142	71.36
1-<15	33	16.58
15>	24	12.06

Notes: n = 202

**Table: Mean scores across tenure.**

Number of respondents	Authentic Leadership	Work Engagement	Perceived Org
<b>Business Unit</b>			
Global Business Services (GBS)	74	36.63	36.63
Global Technology Services (GTS)	41	20.30	20.30
Integrated Operations	13	6.44	6.44
Sales and Distribution	33	16.34	16.34
Software Group	29	14.36	14.36
Systems and Technology Group	10	4.95	4.95
Real Estate Strategy and Operations (RESO)	2	0.99	0.99

**Table: Mean Scores across business units.**

Business Units	Number of respondents	Authentic Leadership	Work engagement	Perceived Org Support
GBS	74	<b>3.92</b>	<b>5.75</b>	<b>4.68</b>
GTS	41	3.15	4.63	3.54
Integrated Ops	13	3.46	5.35	4.16
Sales & Distribution	33	3.65	<b>5.77</b>	4.45
Software Group	29	3.84	5.58	<b>4.84</b>
STG	10	3.74	5.27	4.56
RESO	2	<b>4.09</b>	4.00	3.88

**Table: Mean Scores across tenure.**

Tenure	Number of respondents	Authentic Leadership	Work engagement	Perceived Org Support
Less than 1 year	42	<b>4.12</b>	<b>6.09</b>	<b>5.33</b>
1 to 2 years	45	3.68	5.49	4.34
3 to 5 years	24	<b>3.81</b>	<b>5.65</b>	<b>4.60</b>
6 to 9 years	32	3.40	4.98	3.84
10 and more years	59	3.47	5.16	3.98

**Table: Mean Scores across gender.**

Gender	Number of respondents	Authentic Leadership	Work engagement	Perceived Org Support
Female	82	3.66	5.25	4.40
Male	120	3.72	5.61	4.44

**Table: Mean Scores across level in organisation.**

Level in organisation	Number of respondents	Authentic Leadership	Work engagement	Perceived Org Support
Executives	12	<b>4.13</b>	<b>6.46</b>	<b>5.74</b>
Business unit leader	7	3.15	5.70	4.86
Middle management	20	3.46	5.62	4.30
People manager	13	3.65	5.59	4.58
Specialist role	96	3.84	4.96	3.80
CBD program	9	3.74	5.00	3.56
LDC program	45	<b>4.09</b>	<b>6.13</b>	<b>5.29</b>

**Table: Descriptive statistics, correlation and scale reliabilities for scale variables.**

	Cronbach Alpha	N	Mean	SD	1	2	3
1. Authentic Leadership	0.961	165	3.70	0.93	1		
2. Work Engagement	0.930	162	5.48	1.23	0.5089**	1	
3. Perceived Org Support	0.880	162	4.43	1.40	0.5927**	0.6018**	1

Notes: \*  $p < 0.05$  \*\*  $p < 0.01$  SD: Standard Deviation

**Table: Descriptive statistics, correlation and scale reliabilities for scale variables.**

	Cronbach Alpha	N	Mean	SD	1	2	3	4	5	6	7	8
1. Vigour	0.961	162	5.00	1.55	1							
2. Dedication	0.966	162	5.67	1.38	0.8352**	1						
3. Absorption	0.961	162	5.76	1.11	0.6512**	0.7209**	1					
4. Self-awareness	0.930	165	3.78	1.00	0.4564**	0.4100**	0.3093**	1				
5. Relational Transparency	0.880	165	3.72	0.96	0.4544**	0.3718**	0.3579**	0.8548**	1			
6. Processing Information	0.870	165	3.69	1.00	0.5496**	0.5003**	0.4041**	0.8008**	0.7925**	1		
7. Internalised Moral Perspective	0.908	165	3.55	1.07	0.4961**	0.4286**	0.3557**	0.7667**	0.7810**	0.8607**	1	
8. Perceived Org Support	0.880	162	4.43	1.40	0.5965**	0.5788**	0.4441**	0.5444**	0.5077**	0.5747**	0.5859**	1

Notes: \*  $p < 0.05$  \*\*  $p < 0.01$  SD: Standard Deviation

**Table: Results for hierarchical regression analysis.**

Criterion Variables	
<b>Predictors</b>	<b>Engagement</b>
<i>Step 1</i>	
Authentic Leadership	0.672**
Adjusted R <sup>2</sup>	0.254
F statistic	55.92
<b>Perceived Organisational Support</b>	
<i>Step 2</i>	
Authentic Leadership	0.892**
Adjusted R <sup>2</sup>	0.347
F statistic	86.63
<b>Engagement</b>	
<i>Step 3</i>	
Perceived Organisational Support	0.528**
Adjusted R <sup>2</sup>	0.358
F statistic	90.84
<b>Engagement</b>	
<i>Step 4</i>	
Authentic Leadership	0.310*
Perceived Organisational Support	0.406**
Adjusted R <sup>2</sup>	0.390
F statistic	52.53

Notes: n = 162, \*  $p < 0.0025$ , \*\*  $p < 0.01$

**Table: Regression weights for proposed model of research.**

Fitness Indices	Estimate	S.E.	C.R.	P
Perceived Organisational Support <----- Authentic Leadership	0.892	0.085	10.486	***
Engagement <----- Perceived Organisational Support	0.406	0.079	5.154	***
Engagement <----- Authentic Leadership	0.310	0.110	2.81	0.005

Notes: C.R. > ± 2.58 test significance of estimate at  $p < 0.01$

\*\*\* Significance < 0.001