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**ELUCIDATING THE INFLUENCE OF TRANSFORMATIONAL**  
**LEADERSHIP ON JOB PERFORMANCE: A METABUS-ENABLED**  
**META-ANALYSIS**

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*Abstract*

Over the past three decades, transformational leadership has emerged as a significant antecedent of employee performance across a wide variety of contexts. Prior research has employed meta-analysis to confirm the effect of transformational leadership on job performance. While researchers and practitioners in the field of industrial and organizational psychology have relied heavily on meta-analyses, however, this approach are time consuming and also becoming increasingly difficult to obtain effect sizes as the amount of available research grows exponentially. To address this concern, we utilized metaBUS, a cloud-based research synthesis platform to identify studies conducted between 1980 and 2017. In particular, the search yielded 58031 studies with 713 effect sizes, which were used to replicate and confirm extant studies linking transformational leadership to different facets of job performance. As expected, the meta-analysis confirmed the positive relationship between transformational leadership and job performance. The practical implications and suggestions for future research have been discussed.

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**Keywords:** Job performance, transformational leadership, meta-analysis, cloud-based meta-analysis.



## 1. Introduction

Borman (1978) and Campbell's (1990) researches represented a seminal work on job performance within the domain of Industrial and organizational psychology (I/O psychology). Traditionally, task related behaviours are used as a boundary condition for defining job performance construct (Dalal, 2005; Devonish & Greenidge, 2010). For instance, job performance refers to an observable action, behaviour and outcomes engaged by employees that contribute to the achievement of organizational goals (Campbell et al., 1990; Viswesvaran & Ones, 2000). However, the traditional definitions of job performance appeared to be narrow because they failed to incorporate other categories of performance. The extra-role performance, in-role or task performance, and counterproductive work behaviour are typically the three dimensions of job performance that have been acknowledged by scholars (Iddekinge et al., 2012; Rotundo & Sackett, 2002; Sackett, 2002). In-role performance involves performing of duties and tasks or functions that are explicitly specified in the job description (Murphy, 1989). Examples of in-role performance include daily work routine and other duties that may be assigned by the supervisor. Extra-role performance or organisational citizenship behaviour (OCB) refers to non-mandatory individual behaviours that promotes the effective functioning of the organization, has not been clearly stated in the employment contract (Organ, 1988). Examples of extra-role performance include depending organisation in the public when somebody criticizes it and assisting co-worker to solve work related problem, among others. On other hand counterproductive work behaviour (CWB) is also referred to as workplace deviant behaviour (WDB). In a Seminal work of Robinson and Bennett (1995), WDB has been defined as a “voluntary behaviour that violates significant organizational norms and in so doing threatens the well-being of an organization, its members, or both” (p. 556). Acts that constitute WDB include, but are not limited to absenteeism, safety violations, lateness, illicit drug use, as well as maltreatment of colleagues (Ashton, 1998; O’Neill & Hastings, 2011; Subramaniam et al., 2018).

Following Seminal works of Borman (1978) and Campbell (1990), job performance has become one of the commonly researched constructs in human resource management related field (Judge et al., 2001; Sabiu et al., 2019). From economic perspective, job performance can be a more important determinant of a nation’s sustainable development (Kim & Ployhart, 2014). Reasoning along this direction, Campbell and Wiernik (2015) argued that in the absence of job performance, “there is no team performance, no unit performance, no organizational performance, no economic sector performance, no GDP” (p. 47). Owing to its theoretical and practical importance, job performance has been investigated as an outcome construct in several meta-analytical studies.

Conducting empirical works on transformational leadership has been a well-liked approach to understanding leader effectiveness among researchers (Bass, 1985, 1995; Piccolo & Colquitt, 2006). Transformational leadership theory postulates that certain leader characteristics are likely to stimulate followers’ desired performance outcomes at work (Bass, 1995; Burns, 1978). Four characteristics of the transformational leader have been identified in the literature, including idealized influence, intellectual stimulation, inspirational motivation and individualized consideration (Bass & Avolio, 1993). To date, there has been abundant empirical evidence linking transformational leadership to job performance. For instance, Breevaart et al. (2014) found that transformational leadership fosters followers’ desired job performance. In a study involving g 437 employees in U.S. banking sector, Walumbwa et al. (2008) showed that

transformational leadership was significantly related to supervisor-rated performance. Besides these studies, there are also several other empirical works confirming the positive relationship between transformational leadership and task-related performance across a wide range of contexts (e.g., Aryee et al., 2012; Charbonnier-Voirin et al., 2010; Gooty et al., 2009; Walumbwa & Hartnell, 2011). Given the strong empirical evidence regarding the positive relationship between transformational leadership and job-related performance and based on transformational leadership theory, we postulate that is Job performance is positively influenced by transformational leadership.

## 2. Problem Statement

While there has been a significant advancement in research linking transformational leadership to job-related performance, majority of work in this area concerns itself with testing individual samples. Hence, there is relatively a handful of meta-analytical studies that confirmed transformational leadership's influence on job performance. One major limitation of meta-analytical approach is time consuming. In addition, it is becoming increasingly difficult to obtain effect sizes as the amount of available research grows exponentially.

## 3. Research Questions

In line with the stated problem and research gap, a key research question that ought to be answered is as follows: “*Is Job performance positively influenced by transformational leadership?*”

## 4. Purpose of the Study

This work is intended to address this concern by utilizing metaBUS (Bosco et al., 2017), a cloud-based research synthesis platform to examine the interplay amongst transformational leadership and job performance.

## 5. Research Methods

### 5.1. Literature search

We utilized metaBUS platform to identify and screen relevant scientific journals linking transformational leadership to job performance. To this end, we applied the following search string: “transformational leadership\* OR idealized influence\* OR individualized consideration OR inspirational motivation\* OR intellectual stimulation AND (job performance \* OR employee performance\* OR task performance\* OR followers' performance” between 1980 and 2017.

### 5.2. Measures

**Job performance.** In this study, we identified thirteen specific job-related behaviours representing the underlying dimensions of job performance that have been discussed earlier. These encompass in-role performance, extra-role performance, task performance, subordinate's rated contextual, performance, subordinate's rated task performance, subordinate's rated contextual performance subordinates'

performance abilities, follower task performance, leader-rated task performance, organisational citizenship behaviour, employee creativity, counterproductive work behaviors, and workplace deviance.

**Transformational leadership.** Eighteen specific leader behaviours were identified in our literature search representing various components of transformational leadership. They include contingent reward leadership, differentiated CEO transformational leadership, differentiated individual-focused transformational leadership, idealized influence leadership, individual consideration, inspirational leadership, intellectual stimulation, (leader's self-ratings) charismatic leadership, (subordinates' aggregated ratings) charismatic leadership, (superior's ratings) charismatic leadership, CEO transformational leadership, CEO group-focused transformational leadership, EO individual-focused transformational leadership, change-oriented leadership, leadership empowerment behaviour, participative leadership, transformational Leadership (other-rating), and facilitative leadership.

### 5.3. Analytical procedures

To conduct meta-analysis, we employed multilevel meta-analytic techniques, which is based on restricted maximum likelihood estimation approach as suggested by Bosco et al. (2015), as well as Lee et al. (2017). The meta-analytic techniques is considered as the most suitable technique in this study for the following reasons: First, “unlike typical meta-analytic techniques, multilevel meta-analysis allows estimation of variance components at the effect level and sample level, which captures variance due to sample dependence and other effects associated with the higher (i.e., sample) levels” (Lee et al., 2017, p. 7). Second, multilevel meta-analysis is the default analytic technique that has been incorporated on the metaBUS platform.

## 6. Findings

Traditionally, two models are used in meta-analysis, namely: the fixed effect model and the random effects model (Borenstein et al., 2010). The key assumption underlying fixed effect model is that there exists one true effect size that is common to all the included studies (Borenstein et al., 2010). On the other hand, random effects model assumes that there is variation of the true effects of the included studies (Borenstein et al., 2010). While both fixed effect model and the random effects model employ same sets of formulas to estimate statistics, which occasionally produce similar results, we specifically focused on random effects model in the present study. Random effects model is considered to be appropriate in this study because it has been widely employed in the extant meta-analyses and it allows the findings to be generalized. Table 1 presents the meta-analytic results of the random effect model.

**Table 01.** Meta-analytic results of the random effect model

	Estimate	SE	95% confidence intervals LL; UL	z value	p-value
Intercept	0.24	0.01	[0.21; 0.27]	16.70	0.00***
Tau2_2	0.05	0.00	[0.04; 0.06]	11.57	0.00***
Tau2_3	0.02	0.01	[0.01; 0.04]	4.38	0.00***

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Q statistic on the homogeneity of effect sizes: 10422.85
Degrees of freedom of the Q statistic: 712
P value of the Q statistic: 0
Heterogeneity indices (based on the estimated Tau2):
Estimate
I2_2 (Typical v: Q statistic) 0.63
I2_3 (Typical v: Q statistic) 0.31
Number of studies (or clusters): 302
Number of observed statistics: 713
Number of estimated parameters: 3
Degrees of freedom: 710
-2 log likelihood: 218.23
OpenMx status1: 0 ("0" or "1": The optimization is considered fine.
Other values may indicate problems.)

As shown in Table 1, the homogeneity test of effect sizes were found to be statistically significant having  $Q(df = 712) = 10422.85, p < 0.001$ . The  $\tau^2 = 0.05$  and  $I^2 = 0.63$ . These statistics suggest that high-level of heterogeneity exists. Sixty-three per cent of the total variation was accounted for by the between-study effect. Consistent with the random-effects model, we found the estimated average population correlation coefficient to be statistically significant 0.24 (0.21, 0.27). Hence, the postulated hypothesis that job performance is positively influenced by transformational leadership was accepted because the lower level confidence does not have negative value.

## 7. Conclusion

As pointed out at the outset, despite the significant development in research focusing on job performance, relatively less attention has been given to the meta-analytical studies of the relationship between transformational leadership and job performance. This study had two purposes: (a) to explore the effect of transformational leadership on job performance using the meta-analytical approach and (b) to replicate and confirm extant studies linking transformational leadership to job performance by performing a cloud-based meta-regression analysis (Bosco et al., 2015; Bosco et al., 2017; Lee et al., 2017). The result of the random effect meta-analysis suggests that there is a high degree of heterogeneity among the studies included. This further suggests that the variation of the true effects of the included studies could be attributed to potential moderator (s). We speculate that gender of the participants might explain a significant proportion of the heterogeneity in effect sizes among the studies included. Hence, future meta-analytical studies could address this limitation by testing gender of the participants as a moderator between transformational leadership and job performance.

Furthermore, the result of the meta-regression analysis showed that transformational leadership was positively related on job performance. Transformational leadership influences followers to achieve desired performance outcomes at work by encouraging them to envision attractive future states, by acting as their mentor and role model, as well as motivating them (Bass, 1995; Boerner et al., 2007; Burns, 1978). This finding is not surprising because it is consistent with extant empirical studies (e.g., Aryee et al., 2012; Charbonnier-Voirin et al., 2010; Gooty et al., 2009; Walumbwa & Hartnell, 2011). The findings regarding

the coefficient of determination (R-squared value) is one of the most important aspects of the meta-regression analysis that out to be discussed. As reported within the preceding section, sixty-three percent of the variation in job performance has been explained principally by transformational leadership. This implies that thirty-seven percent of the variation in job performance might be explained by different variables that aren't incorporated in our meta-regression model. Thus, future analysis would profit by together with a lot of variables to extend the proportion of variation within the job performance.

The findings of the present study have both theoretical and practical implications. From practical perspective, the findings imply that transformational leadership is an important consideration in enhancing employee performance at work. Given that leadership training programme could improve follower performance (Dvir et al., 2002), organisations should periodically organisation training to inculcate transformational leadership style among immediate managers and supervisors (Ariyabuddhiphongs & Kahn, 2017).

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