

## Using Partial Least Squares Approach to Predict the Impact of Transformational Leadership on Employee Commitment to Organizational Change

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**Abstract:** The aim of this study was to examine the relationship between transformational leadership and employee commitment to organizational change by utilization Partial Least Squares (PLS) approach. Data were collected through a survey among employees who work in a Yemeni public sector organization. The finding showed that idealized influence and individual consideration were found significantly and positively related to all dimensions of employee commitment to change. While the inspirational motivation and intellectual stimulation have different finding with each dimensions. The limitations of this study may include several issues that may lead to future studies. This study contributes to the change management literature by integrating the linkage between leadership and employee commitment to change. It is the first study conducted by using PLS with stated model and conducted in least developed country, such as Yemen.

**Key words:** Leadership, commitment to change, organizational change, employee, Yemen

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### INTRODUCTION

Change is a phenomenon that individuals and organizations face on a daily basis (Battilana *et al.*, 2010). Some studies, such as Herold *et al.* (2008) have indicated that change has become one of the most important challenges faced by organizations and their leaders at all levels. Madsen *et al.* (2005) have argued that change efforts are crucial for organizations to be effective and efficient in today's economy and in the future. Thus for organizations to be effective and efficient, they must change to cope with the rapid changes occurring in an unstable environment (Erakovic and Powell, 2006). Furthermore, leaders are the key personnel responsible for formulating and implementing successful organizational change by promoting commitment to change among the employees (Herold *et al.*, 2008; Kotter, 1996). Researchers have also suggested that changed leadership creates responsible leaders (Ackerman, 1997) who are able to lead the organization through effective changes by guiding and supporting the people in the organization throughout the process. This view is parallel to Karp and Helgo (2008) who have mentioned that leaders are encouraged to exemplify change leadership behaviors and act as influential developers of positive organizational change. Accordingly, these transformational leaders thereby demonstrate great ability to lead the change. A number of researchers have suggested that transformational

leadership style is one of the most effective facilitators of organizational change. For example, Kotter (1995) and Nadler and Tushman (1990) have stated that change requires leaders who can tap into the deep convictions of others and connect those feelings to the purpose; they show the meaning of people's work to that larger purpose and are driven by goals or ideals that are bigger than what any individual can accomplish. Lewin (1951)'s model theory, one of the most common and earliest theories of organizational change process describes a force-field model that can be divided into three stages; unfreezing which corresponds to readiness and resistance to change, changing or moving which corresponds to adoption and exploration and refreezing which corresponds to commitment.

Regardless of the type of organization that is private or public, change is essential for the organization to be able to remain efficient to meet the public's demands and to maintain its position in the marketplace. However as the Yemeni government realized the essential call for change, it officially began administrative and financial reforms in 1997. To successfully implement change, it is acknowledged that many challenges may arise. Such was the case in Yemeni when the changes in the administrative and financial organizations were being implemented. As demonstrated by previous researchers, such as the employee commitment to change and the effective leadership (Ahmad and Gelaidan, 2011; Gelaidan and

Ahmad, 2013). If there is no support for the change from the people within the organization, any attempt to implement change will fail. This view is consistent with previous studies, such as Elias (2009) and the later impressive research of Ford *et al.* (2003) and Herscovitch and Meyer (2002) who indicated that personal commitment to change is a crucial factor in successful change. Moreover, Meyer *et al.* (2007) indicated that in spite of the fact that commitment is usually referred to as a crucial factor of successful implementation of organizational change, there is little empirical evidence to support this claim. Consistent with this premise, this researcher believes that employee support for organizational change is a crucial factor in the success of organizational change and therefore, responds to the urgent call from the pioneer in this field by conducting this study.

Enhancing employee effort, commitment and performance requires effective leadership. Furthermore, Fiedler (1967) indicated that leadership, as one of the main factors behind interpersonal relationships with employees, affects employees and therefore is effective leadership is a critical element in the success of any organizational change attempt. This view was supported by Drucker (2002), Herold *et al.* (2008) and Kotter (1995). Herold *et al.* (2008) note that because successful organizational change requires an effective leader who can facilitate change, leadership and organizational change are important aspects of study for researchers and practitioners. Consistent with this premise, previous studies, such as Bass and Avolio (1994) and Kotter (1996) have indicated that transformational and transactional leadership are the most dominate and effective leadership styles.

**Commitment to change:** Meyer and Allen (1997) stressed that commitment is arguably one of the most important factors involved in employees' support for change initiatives. Other targets of commitment could include supervisors, organizational units, occupations, unions, goals, entities or behaviors. Herscovitch and Meyer (2002) established the commitment to change construct based on the organizational commitment model and the general commitment model. However in spite of their efforts, there remains a lack of empirical studies that measure the construct, its antecedents and its outcomes (Cunningham, 2006). Regardless, researchers posit that the employee is a main factor in the successful implementation of organizational change and that similar to the employees is important because he plays a critical role in the success or failure of the organizational change (Huy, 2002). Researchers support the supposition, finding that employee commitment to change is an essential part

of the successful implementation of change implementation (Oakland and Tanner, 2007; Wanberg and Banas, 2000). Recent studies, such as Fedor *et al.* (2006), Herscovitch and Meyer (2002) and Oakland and Tanner (2007) have further demonstrated that employee commitment is one of the most important factors when implementing change initiatives, emphasizing that without such support, even the best-developed plans would fall by the wayside. Huy (2002) further argued that employees are more likely to be an important factor in supporting organizational change when there is a sense of trust and attachment to the organization. The researchers further examined the importance of employee commitment to avoid complacency.

Herscovitch and Meyer (2002) conceptualized the concept of employee commitment to change into three dimensions-affective, continuance and normative. This study focused on the continuance dimension of commitment to change which is considered the 'have to dimension' as it refers to realizing the costs correlated with the failure to provide support for organizational change (Meyer *et al.*, 2002). An individual who displays high continuance commitment believes that it is costly not to be committed to the target or course of action (change) (Allen and Meyer, 1996; Meyer *et al.*, 2002). This form of commitment considers the costs associated with an individual's commitment or lack of commitment to a specific target or change. The empirical evidence has indicated that high continuance commitment is likely to bind an individual to a target or course of action. However, it is unlikely that an individual will be committed to anything above and beyond that particular target (Herscovitch and Meyer, 2002). For example, an individual might demonstrate a commitment to staying with an organization but not demonstrate a commitment to high performance. Accordingly, this study examines the effect of leadership on the employee' scontinuance commitment to change.

**Transformational leadership:** Transformational leadership theorists posit that transformational leadership represents the strong forces of leadership that motivate others to perform at their highest level (Avolio and Bass, 1988). Furthermore, researchers suggest that the shift in this perspective is correlated with transformational leadership as transformational leadership is perceived to be a more effective leadership style for leading change (Avolio and Bass, 2004; Yammarino and Bass, 1990). Bass (1990) proposed the following four transformational leadership styles, namely; idealized influence, inspirational motivation, intellectual stimulation and individualized consideration as these styles largely contributed to leaders efforts when promoting change

that resulted in motivational commitment between the leader and the employees. It was observed that idealized influence, inspirational motivation and intellectual stimulation styles of transformational leadership help a leader motivate and connect the organization's employees to the company's new vision while individualized consideration helps the business leader connect with and to understand the personal impact of change on the employees.

Bass and Steidlmeier (1999) found that transformational leadership increases the domains of effective freedom, conscience and work intention. Similarly, Avolio and Bass (1988) argues that Burns (1978) provided a definition of a transformational leader as one who motivates his followers to work for transcendent goals as opposed to immediate self interests and for self actualization as opposed to safety and security. This style of leadership addresses the transformations that occur in the leader, as well as in the follower's perspectives. Accordingly, transformational leadership is not considered a separate approach from transactional model even though it may appear to have major add-on affects to such models (Koh *et al.*, 1995). According to Bass (1985) and Bycio *et al.* (1995), the augmentation hypothesis states that components of transformational leadership should predict performance and satisfaction outcomes beyond what can be accounted for by the transactional scales alone but not vice versa (p. 496). In other words, the augmentation hypothesis emphasizes that transformation stems from transactional leadership but the latter cannot build on the effects of that transformation because transactional modes are pertinent in the early stages of leadership as they guide followers in the task at hand. However, once the leaders have achieved a certain level of change among his followers, both identities move beyond the simple exchange relationship and focus on performance. Avolio and Bass (2002) conceptualized and measured transformational leadership in four dimensions, namely; idealized influence, inspirational motivation, intellectual stimulation and individualized consideration.

Burns (1978) noted that transformational leadership can be perceived as a way to increase the organization's recognition of its need for change by increasing levels of motivation. He also described transformational leaders as ordinary agents who are able to empower and encourage subordinates to create a mission, complete goals and gather data in the process of implementing change that supports the mission. This style of leadership can enhance an employee's commitment to change. Bass and Avolio (1993) posited that as transformational leadership focuses on the behavior of the employees, it may affect their behavior towards the organization and may

positively influence the essential values, beliefs and attitudes of subordinates, thereby motivating them to strive to attain higher goals and improve performance. Bass (1985) defined transformational leaders based on Burns (1978)' definition, such that transformational leaders attempt to bring subordinates, followers, clients or constituencies to a greater awareness about the issues of consequence. Accordingly, transformational leadership is connected to an employee's commitment to change by educating the followers about the importance of the job and the organizational goals that must be achieved successfully, a view supported by previous studies, such as Bass (1985) and Yukl (1989). In addition, Burns (1978) defined the transformational leader as one or more persons engaged with others in any way that leaders and followers increase the level of motivation and morality. Based on previous studies, such as Bass and Avolio (1993) transformational leadership consists of the following four concepts; idealized influence leadership, inspirational motivation, intellectual stimulation and individualized consideration.

A leader who adopts the idealized influence style of leadership is one who according to Bass (1990), shares a vision and sense of mission with determination and conviction and who proposes radical, innovative solutions to critical problems. A leader who adopts an inspirational motivational leadership style is one who motivates and inspires subordinates by implementing practices that create attractive vision statements, promote goals and inspire interest and optimism among followers (Bass and Avolio, 1993). A leader who leads by way of intellectual stimulation, according to Bass (1998) is one who encourages new ways and new solutions when considering old methods and problems by challenging people to challenge their personal assumptions and beliefs. The individualized consideration leadership style is concerned with focusing on each member of the organization at an individual level. Such behavior leads to a high level of commitment by the followers to the leader's vision and accordingly, it generates additional effort being exerted by the employees, as well as increased satisfaction (Avolio and Bass, 2002). As a consequence, the relation between transformational leadership and the follower's commitment to change is expected to be positive:

**Hypothesis 1:** The transformational leadership dimensions, namely idealized influence, individualized consideration, inspirational motivation and intellectual stimulation are positively related to employee commitment to organizational change dimensions, namely; affective, continuance and normative (Fig. 1).

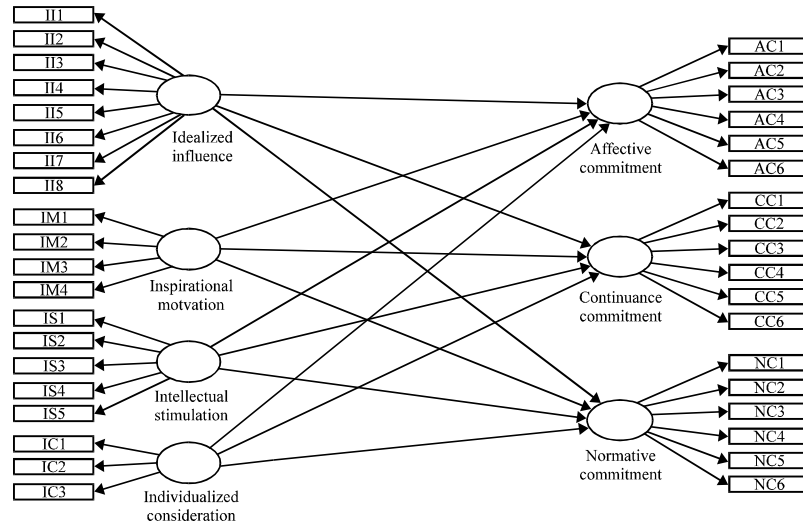


Fig. 1: Research model

**MATERIALS AND METHODS**

The unit of analysis for this study was the employees in the Yemeni public sector. All respondents were guaranteed that the data would be used only for academic purposes. The human resource manager for each selected ministry provided us with a staff list from which we then identified the target participants based on a stratified random sampling.

**Data collection:** A total of 786 questionnaires were distributed and a hand-to-hand data collection method used with some assistance from an RA. The process period to distribute and collect data was approximately 4 months. A total of 371 valid questionnaires for the analysis were collected for a response rate of approximately 47%. The study describes the assessment of the goodness of the measure of these constructs including their validity and reliability. The population of the study included the employees in the public sector of Yemen.

**Measures:** Organizational commitment to change was assessed using the affective, continuance and normative dimensions with a 6-item scale for each dimension (Herscovitch and Meyer, 2002) while transformational leadership consists of four dimensions (idealized influence, individualized consideration, inspirational motivation and intellectual stimulation) which were measured using a 20-item MLQ developed by Avolio and Bass (2004).

**Goodness of measures:** The test for the goodness of the measures was based on two essential criteria, validity and

reliability. Reliability refers to the consistency of the instrument to assess what it is designed to assess while validity refers to the degree to which the instrument evaluates what it is intended to evaluate (Sekaran and Roger, 2010).

**Construct validity:** Sekaran and Roger (2010) defined construct validity as the degree to which a test measures what it claims or purports to measure. Broadly speaking, construct validity supports the degree to which a measurement instrument properly measures the construct it is supposed to measure. The two validity assessments, convergent and discriminate were administered to determine whether the instruments addressed the operationalized concept or not. Table 1 indicates that there exist no issues with validity that all items loaded above the recommended 0.5 and that there was no cross-loading (Hair *et al.*, 2010). Furthermore, the results in Table 1 indicate that all items measure what they are intended to measure with appropriate loadings for the constructs. Thus, it can be concluded based on the results as presented here in that the construct validity was confirmed.

**Convergent validity:** Convergent validity is defined as the degree to which several items measuring the same construct are consistent with each other. For the purpose of assessing the convergent validity, several tests may be required, such as factor loadings, composite reliability and the average variance extracted. As previously mentioned, Hair *et al.* (2010) suggested that  $\geq 0.5$  is an acceptable loading value. Accordingly, all items in the Table 1 meet or exceed this value. Composite reliability is described as the degree to which the construct indicators

Table 1: Loadings and cross-loadings

Items	AC	CC	IC	II	IM	IS	NC
AC1	0.819*	0.596	0.468	0.391	0.465	0.490	0.539
AC2	0.765*	0.571	0.390	0.305	0.313	0.417	0.518
AC3	0.848*	0.602	0.371	0.405	0.401	0.449	0.512
AC4	0.854*	0.584	0.376	0.389	0.382	0.439	0.515
AC5	0.858*	0.620	0.427	0.437	0.392	0.498	0.544
AC6	0.796*	0.626	0.451	0.381	0.360	0.455	0.545
CC1	0.786	0.781*	0.432	0.427	0.436	0.467	0.592
CC2	0.735	0.737*	0.498	0.341	0.389	0.461	0.539
CC3	0.355	0.726*	0.362	0.142	0.237	0.331	0.633
CC4	0.392	0.784*	0.448	0.178	0.240	0.352	0.659
CC5	0.470	0.833*	0.479	0.269	0.360	0.431	0.755
CC6	0.565	0.815*	0.469	0.253	0.324	0.434	0.689
IC1	0.382	0.412	0.763*	0.175	0.318	0.549	0.462
IC2	0.449	0.542	0.864*	0.282	0.424	0.569	0.581
IC3	0.376	0.427	0.773*	0.192	0.402	0.482	0.509
II1	0.387	0.320	0.256	0.808*	0.269	0.319	0.306
II2	0.338	0.176	0.205	0.769*	0.302	0.282	0.201
II3	0.346	0.244	0.198	0.832*	0.412	0.329	0.203
II4	0.423	0.367	0.219	0.816*	0.367	0.339	0.323
IM1	0.224	0.208	0.279	0.318	0.704*	0.405	0.264
IM3	0.422	0.371	0.405	0.392	0.854*	0.619	0.376
IM4	0.444	0.427	0.446	0.315	0.863*	0.579	0.462
IS1	0.463	0.394	0.371	0.354	0.671	0.725*	0.382
IS3	0.504	0.454	0.522	0.405	0.527	0.805*	0.407
IS4	0.340	0.384	0.522	0.191	0.428	0.742*	0.443
IS5	0.336	0.360	0.581	0.205	0.364	0.704*	0.402
NC1	0.539	0.713	0.560	0.267	0.467	0.490	0.852*
NC2	0.565	0.764	0.601	0.295	0.398	0.519	0.870*
NC3	0.488	0.718	0.525	0.221	0.360	0.420	0.885*
NC4	0.553	0.719	0.501	0.314	0.383	0.447	0.900*
NC5	0.573	0.624	0.543	0.262	0.348	0.455	0.792*
NC6	0.573	0.684	0.589	0.334	0.445	0.466	0.838*

\*Values are the loadings for items that are above the recommended value of 0.5

indicate the latent values (Ramayah *et al.*, 2011). Hair *et al.* (2010) recommended that the cut off value for CR is 0.7. Again, all constructs exceed the suggested value as they range from 0.833-0.943. Barclay *et al.* (1995) suggested that the Average Variance Extracted (AVE) which measures the variance captured by the relative measurement error, should be >0.50 (Ramayah *et al.*, 2011). Table 2 shows that the AVE exceeds the recommended value (Barclay *et al.*, 1995) as it ranges from 0.555-0.734. Finally, the findings of the measurement model as shown in Table 3, indicate that all seven constructs, namely; affective, continuance and normative commitment to change as well as individual consideration, idealized influence, inspirational motivation and intellectual stimulation are all valid measures of their respective constructs based on their parameter estimates and statistical significance.

**Discriminant validity:** Discriminant validity is defined as, the degree to which the measures of constructs that theoretically should not be related to each other are in fact, related. Ramayah *et al.* (2011) indicated that discriminant validity of the measures was assessed by

Table 2: Measurement model

Constructs	Items	Scale	Loading/weights	AVE*	CR**
Affective commitment to change	AC1	Reflective	0.819	0.679	0.927
	AC2		0.765		
	AC3		0.848		
	AC4		0.854		
	AC5		0.858		
	AC6		0.796		
Continuance commitment to change	CC1	Reflective	0.781	0.609	0.903
	CC2		0.737		
	CC3		0.726		
	CC4		0.784		
	CC5		0.833		
	CC6		0.815		
Individualized consideration	IC1	Reflective	0.763	0.651	0.882
	IC2		0.864		
	IC3		0.773		
Idealized influence	II1	Reflective	0.808	0.642	0.843
	II2		0.769		
	II3		0.832		
	II4		0.816		
Inspirational motivation	IM1	Reflective	0.704	0.656	0.850
	IM3		0.854		
	IM4		0.863		
Intellectual stimulation	IS1	Reflective	0.725	0.555	0.833
	IS3		0.805		
	IS4		0.742		
	IS5		0.704		
	NC1	Reflective	0.852		
NC2		0.870			
NC3		0.885			
NC4		0.900			
NC5		0.792			
NC6		0.838			

\*\*Composite Reliability (CR) - (square of the summation of the factor loadings)/((square of the summation of the factor loadings)+(square of the summation of the error variances)); \*Average Variance Extracted (AVE) - (summation of the square of the factor loadings)/((summation of the square of the factor loadings)+(summation of the error variances))

examining the correlations between the measures of potentially overlapping constructs. Hair *et al.* (2010) recommended that items in particular constructs should have higher loadings than other constructs and have increased shared average variances. Table 4 indicates that the average variance of each construct which indicates the adequate discriminant validity is greater than the squared correlation for each construct. In sum, the discriminant validity meets the requirements and the recommended cutoffs.

**Reliability analysis:** Cronbach's alpha coefficient is used to assess the inter-item consistency of the measurement items (Ramayah *et al.*, 2011). Table 5 summarizes the reliability test of the measures. The Cronbach's alphas of all variables ranged between 0.721 and 0.927, thus exceeding the suggested value of 0.70 (Hair *et al.*, 2010). As previously mentioned, the loadings for all items were acceptable and greater than those suggested by the scholars. Therefore, it can be concluded that the measurements were all valid and reliable.

Table 3: Summary results of the model construct

Constructs	Items	SE (STERR)	
		standardized estimate	t-values
Affective commitment to change	AC1	0.010	22.272
	AC2	0.012	15.238
	AC3	0.010	20.305
	AC4	0.007	28.685
	AC5	0.008	29.046
	AC6	0.011	18.170
Continuance commitment to change	CC1	0.015	15.454
	CC2	0.015	15.744
	CC3	0.015	11.008
	CC4	0.011	18.114
	CC5	0.010	23.403
	CC6	0.010	21.287
Individualized consideration	IC1	0.021	17.518
	IC2	0.025	18.898
	IC3	0.025	15.688
Idealized influence	II1	0.033	10.252
	II2	0.026	9.366
	II3	0.023	12.051
	II4	0.028	13.375
Inspirational motivation	IM1	0.033	7.964
	IM3	0.025	17.750
	IM4	0.033	15.137
	IS1	0.029	11.585
Intellectual stimulation	IS3	0.024	15.416
	IS4	0.022	14.512
	IS5	0.023	13.226
	NC1	0.007	28.870
	NC2	0.007	29.386
Normative commitment to change	NC3	0.006	27.791
	NC4	0.007	26.038
	NC5	0.008	24.805
	NC6	0.008	26.496

Table 4: Discriminant validity of constructs

Constructs	AC	CC	II	IC	IM	IS	NC
AC	0.823*						
CC	0.728	0.779*					
II	0.469	0.358	0.806*				
IC	0.504	0.580	0.275	0.800*			
IM	0.471	0.435	0.417	0.478	0.807*		
IS	0.558	0.537	0.396	0.665	0.674	0.744*	
NC	0.642	0.823	0.331	0.649	0.470	0.547	0.856*

\*Diagonals represent the square root of the AVE and the off-diagonals represent the correlations

Table 5: Results of reliability test

Constructs	Measurement items	Cronbach's alpha	Loading range	No. of items
Affective commitment to change	AC1-AC6	0.905	0.763-0.864	6 (6)
Continuance commitment to change	CC1-CC6	0.872	0.796-0.832	6 (6)
Idealized influence	II1-II4	0.823	0.769-0.832	4 (8)
Individualized consideration	IC1-IC3	0.721	0.763-0.864	3 (3)
Inspirational motivation	IM1, IM3, IM4	0.745	0.704-0.863	3 (4)
Intellectual stimulation	IS1, IS3-IS5	0.732	0.725-0.805	4 (5)
Normative commitment to change	NC1-NC6	0.927	0.792-0.900	6 (6)

## RESULTS

**Hypotheses testing:** Figure 2 and Table 6 show the findings of the path analysis which tests the

12 hypotheses. All but 3 hypotheses were positively related employee commitment to the three change dimensions-affective, continuance and normative. Specifically, idealized influence was positively related to the affective dimension ( $\beta = 0.276, p<0.01$ ) to the continuance dimension ( $\beta = 0.156, p<0.01$ ) and to the normative dimension ( $\beta = 0.108, p<0.01$ ). In the same manner, individual consideration was positively related to the affective dimension ( $\beta = 0.229, p<0.01$ ) to the continuance dimension ( $\beta = 0.394, p<0.01$ ) and to the normative dimension ( $\beta = 0.802, p<0.01$ ). On the other hand, inspirational motivation was not significantly related to either the affective or continuance dimensions but it was significantly related to the normative commitment to change ( $\beta = 0.130, p<0.01$ ). Intellectual stimulation was found to be significantly related to the affective dimension ( $\beta = 0.238, p<0.01$ ) and the continuance dimension ( $\beta = 0.164, p<0.01$ ) but it was found not to be significantly related to the normative dimension. Therefore, H<sub>1</sub>-H<sub>6</sub>, H<sub>9</sub>, H<sub>10</sub>, H<sub>11</sub> are confirmed while H<sub>7</sub>, H<sub>8</sub> and H<sub>12</sub> are not confirmed. Based on Table 6, the most significant predictor of affective commitment to change was idealized influence followed by intellectual stimulation. Furthermore, individual consideration was found to be the most reliable predictor with respect to continuance commitment to change followed by intellectual stimulation while normative commitment to change was affected more by individual consideration followed by inspirational motivation.

**Predictive relevance of the model:** The R<sup>2</sup> can describe the variance effect of independent or exogenous variables on the dependent or endogenous variables. Accordingly, Cohen (1988) indicated that a value of 0.26 for R<sup>2</sup> is considered substantial, a value of 0.13 is considered moderate and a value of 0.02 is considered weak. Accordingly, the results in Table 7 indicate that the independent variables, namely; idealized influence, individual consideration, inspirational motivation and intellectual stimulation can explain 0.418 of the variance of affective commitment to change. Similarly, these independent variables can also explain 0.403 of the variance of continuance commitment to change and as well, they can explain approximately 0.467 of normative commitment to change. All R<sup>2</sup> were at substantial level, as suggested by Cohen (1988). Finally, the results showed that the cross-validated redundancy and commonality exceeds 0.0 as suggested by Fornell and Cha (1994). Thus, it can be concluded that the model demonstrates adequate predication reliability.

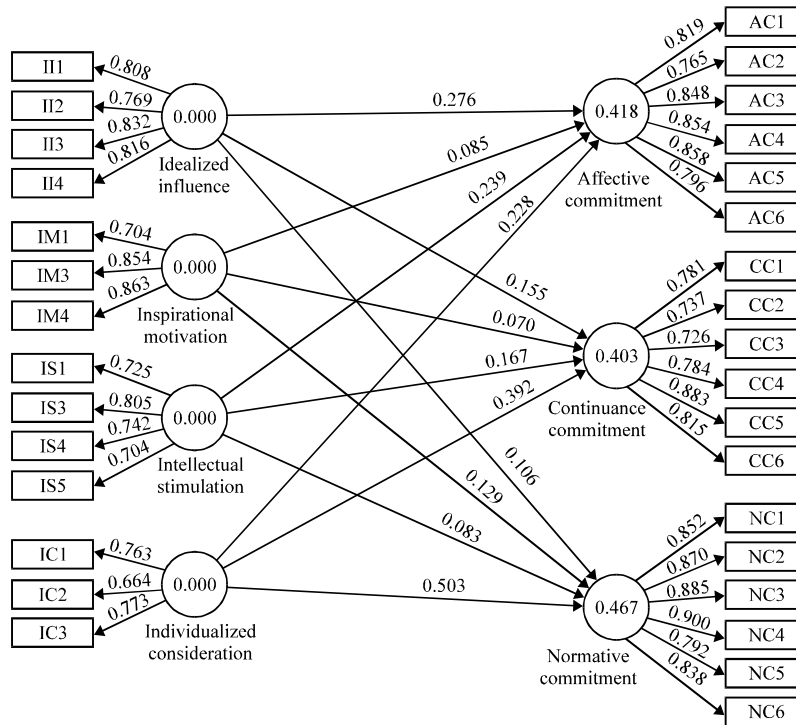


Fig. 2: Results of path analysis

Table 6: Path coefficients and hypothesis testing

Hypothesis	Relationship	$\beta$	SE (STERR)	t-values	Decision
H <sub>1</sub>	II→AC	0.276	0.045	6.137**	Confirmed
H <sub>2</sub>	II→CC	0.156	0.050	3.106**	Confirmed
H <sub>3</sub>	II→NC	0.108	0.046	2.336**	Confirmed
H <sub>4</sub>	IC→AC	0.229	0.064	3.576**	Confirmed
H <sub>5</sub>	IC→CC	0.394	0.063	6.267**	Confirmed
H <sub>6</sub>	IC→NC	0.502	0.052	9.651**	Confirmed
H <sub>7</sub>	IM→AC	0.088	0.065	1.312*	Not confirmed
H <sub>8</sub>	IM→CC	0.073	0.054	1.303*	Not confirmed
H <sub>9</sub>	IM→NC	0.130	0.051	2.509**	Confirmed
H <sub>10</sub>	IS→AC	0.238	0.080	2.999**	Confirmed
H <sub>11</sub>	IS→CC	0.164	0.065	2.558**	Confirmed
H <sub>12</sub>	IS→NC	0.084	0.070	1.187*	Not confirmed

\*\*p<0.01 (2.33); \*p<0.05 (1.645)

Table 7: Prediction relevance of the model

Endogenous	R <sup>2</sup>	Cross-validated redundancy	Cross-validated communality
Affective commitment to change	0.418	0.272	0.679
Continuance commitment to change	0.403	0.229	0.608
Normative commitment to change	0.467	0.325	0.734

**Goodness of Fit (GoF) of the model:** Tenenhaus *et al.* (2005) defined goodness of fit as the global fit measure (GoF) which also considers only one goodness of fit measure in the PLS structural equation modeling. Wetzels *et al.* (2009) suggested that the optimal values for the GoF are 0.1 (small), 0.25 (medium) and 0.36 (significant). Thus, the GoF can be calculated by the

geometric mean of the average variance extracted and the average R<sup>2</sup> for the dependent variables as given by the equation:

$$\begin{aligned}
 \text{GoF} &= \sqrt{R^2 \times \text{Average communality}} \\
 &= \sqrt{0.429 \times 0.647} \\
 &= 0.527
 \end{aligned}$$

The results show that the GoF = 0.527. That is the goodness of fit for the model in significant, as suggested by Wetzels *et al.* (2009) and demonstrates adequate global PLS model validity.

## DISCUSSION

As hypothesized, there is a significant positive relationship between transformational leadership dimensions (idealized influence, individualized consideration, inspirational motivation and intellectual stimulation) and employee commitment to change dimensions (affective, continuance and normative). In this study, the empirical results indicate that some of transformational leadership dimensions demonstrated positive relationships with employee commitment to change dimensions whereas others were found not to

have any significant relationships. Specifically, idealized influence and individual consideration were found to be significantly and positively related to all dimensions of employee commitment to change. On the other hand, inspirational motivation was not significantly related with affective or normative commitment to change but was significantly related with continuance commitment to change. The final predictor, intellectual stimulation was found to be a significant predictor for affective and continuance commitment but was not related to normative commitment to change. It is worth noting that the empirical findings in this current study are consistent with previous studies including Ahmad and Gelaidan (2011), Gelaidan and Ahmad (2013), Herold *et al.* (2008), Herold *et al.* (2007), Lo *et al.* (2009, 2010), Michaelis *et al.* (2009), Parish *et al.* (2008) and Yu *et al.* (2002). The study indicates that the civil servants in the Yemeni ministries are more responsive and obedient to leaders who care about their individual and collective needs. Transformational leadership works closely with the subordinates in several ways. For example, such leaders pay close attention to the individual and intellectually motivate the individual by way of idealized influences and stimulation motivation. However, the inspirational motivation characteristic of transformational leadership was found not to be an important aspect regarding affective or normative commitment to change but was significant with respect to continuance commitment to change. These results are due to the components of the commitment to change, as well as the role that different cultures can play with respect to transformational leadership. As evident in the extant literature, affective commitment to change requires that employees support the required change at a personal level (Herscovitch and Meyer, 2002; Meyer and Herscovitch, 2001). Thus, those who are really involved in this type of commitment believe in the value of the change and in the organization's objectives. At the same time, continuance commitment to change requires thinking about the cost if employees oppose or fail to support the change (Herscovitch and Meyer, 2002). Finally, those employees who support normative commitment to change may be concerned with the financial or personal benefits that are inherent in such a change. Arguably based on the findings of this current study, transformational leadership dimensions still affect those employees who view employee continuance commitment to change based on expected value. This is an indication that the more the employees view their leaders as possessing the qualities of transformational leaders, the more inclined they will be

to support issues regarding continuance commitment to change. The aforementioned arguments are theoretically consistent with the extant literature that has argued that transformational leadership possesses the ability to establish commitment to change whether it is affective, continuance or normative. Finally, normative commitment to change refers to feelings of obligation to the organization and the need to reciprocate payback to the organization in some way. Inspirational motivation and intellectual stimulation were not related to continuance commitment to change. In this respect, perhaps the Yemeni public sector should train leaders on how to delegate authority with concern for other factors. In conclusion, based on the evidence from the extant literature and the practical findings in this research, transformational leaders have the ability to create the required commitment to change by enhancing the collective effort of the employees (Gelaidan and Ahmad, 2013; Lo *et al.*, 2010; Yu *et al.*, 2002). Therefore, even though there was no significant relationship found between some of the transformational leadership dimensions but it is evident that the employees in Yemen require mixed leadership styles to enhance and promote commitment to change among the employees.

## **CONCLUSION**

There is continued debate regarding the practical and theoretical factors related to enhancing employee commitment to change. This study was a response to the call to examine the effects of transformational leadership styles on employee commitment to change. Accordingly, the study found that transformational leadership is one of the effective leadership styles that can truly enhance commitment to change among subordinates. Although, the findings are clear, there remains a gap among these concepts, thus indicating that further investigation is needed to reduce the lack of resistance to change among employees. As previously mentioned, limitations are usually inherent with any study, particularly with studies on change management and leadership.

## **LIMITATIONS**

There are several limitations with this study. First, as the data collection was cross-sectional, further studies may consider a longitudinal approach. Additionally, it may be interesting to examine pre and post changes with respect to organizational change. The current model was not comprehensive as it neglected various concepts of leadership style, such as



leader competency, effectiveness, employee change involvement, engagement, satisfaction, communication, etc. Furthermore, it would be good to duplicate this study in other contexts and cultures.

### IMPLICATIONS

There are both theoretical and practical implications associated with this study. Based on the researchers' observations and the extant literature in the field, this study is considered the first to employ an empirical model that connect two important concepts leadership and change management. Accordingly, several statistically significant relationships with practical applications were identified. Transformational leadership has assumed an important role in promoting commitment to change in the Yemen context. Particularly, the public sector of Yemen may use these findings as it implements change. This study can also help in assessing pre and post changes with respect to subordinates. It further provides organizations with good strategies for implementing training and motivational programs increasing awareness among employees about the value of change and address concerns regarding leadership behaviors, there by enhancing the efficiency and quality of leaders. Overall, the results indicate that leadership style and employee commitment to change are still vague concepts that require further study.

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