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Analysing Parsimonious Model of OL and OE Using SEM Technique

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ABSTRACT

Purpose: Highest level of growth in an organisation required consistently growth and a higher level of performance. Growth is subjective for every organisation but performance is required to maintain. Performance of the organisation depends upon the human assets i.e., employees. These assets must be work in the same direction of the organisation. Organisational learning, culture and leadership qualities in an organisation influence employees to work in a better way. Presently, Many studies conducted to find the efficient solution of the organisation but fail to present standard model. The study discusses the role played by organizational learning in organizational effectiveness. Literature illustrated that learning in organizational depends on the culture and leadership practice within the organization.

Design/methodology/approach: A model has been proposed and tested hypothesizing direct associations between organizational effectiveness and three predictor variables i.e. organization learning, culture and practice of transformational leadership. The data collected through questionnaire were analysed using IBM SPSS and AMOS. The structural equation modelling technique was used to test the hypothesized relationships.

Findings: Analysis showed that organizational learning mediates between transformational leadership - organizational effectiveness and organizational culture – organizational effectiveness. Authors found that transformational leadership is positively related to organizational effectiveness and culture. Organizational culture seemed to be positively related to effectiveness. Organization learning not only has a significant relationship with culture and effectiveness but also mediates the relationship between culture and effectiveness. Organization learning also influences the relationship between leadership and effectiveness.

Originality/value: The study was based in India and included big private telecom players such as Airtel, Reliance, Vodafone, Uninor, TATA Docomo, and Idea. The study applied stratified random sampling method

for data collection. Therefore, the study is focused on a very specific sector and region and offers comprehensive and practical suggestions.

Keyword: Organizational learning, organizational effectiveness, organizational culture, transformational leadership, SEM, AMOS.

1. INTRODUCTION

Organizational learning (OL) is a process of transformation by which different investors, interested parties, contributors share their learning experiences as an individual and collectively to attain the predetermined goal of an organization (S. Akhtar, Arif, Rubi, & Naveed, 2011). In this era, the rate of changes in technology are prompted and it formed a knowledge-based economy. Therefore, organizations need not only to adapt quickly to change for their survival and growth but must also develop such mechanisms that can help them to be ahead of traditional and non-traditional competitive market.

It has been suggested that organizations which are struggling should try to have a learning organizational culture (OC) for creating, acquiring, and transfer knowledge and modify management's behaviour to reflect new knowledge and insights (Garvin, 1993; N. Akhtar, Ahmed, & Mujtaba, 2013). OL is built on individual and team learning. It can still take place even if all members of the organization may not have learned the new knowledge (Alanoğlu & Demirtaş, 2016) OL is examined based on the ability of an organization to adapt to its cultural environment (Dibella, Nevis & Gould, 1996; Alanoğlu & Demirtaş, 2016). The main source of competitive advantage and success of an organization is nothing but its knowledge assets and capacity of learning (Argyris & Schon 1978; McLean, 2009). According to Garvin (2000), lack of OL and OC makes organizations and individuals simply repeat old practices. This becomes the failure point of any organisations and hence shutdown. This also highlights a great need or learning in the organisation with supportive OC. The development of learning culture not only helps organization members to create new knowledge but also helps them remain dynamic too. The dynamic organisation can sustain for long as it has the capacity to tackle the grey time that leads to achieving goals related to organizational effectiveness (OE) and success (Nazari et. al., 2012). Transformational leadership (TLD) approach can be a great tool to create a dynamic organization.

From this stem of literature, there is a need to understand the relationship among the OL, OC, TLD and OE.

In this study, we intend to develop a conceptual model for OL and its antecedents and analyze their relationship with OE in context with Indian private telecom service provider. This study is focused on fulfilling three main objectives mentioned in the paper related to three important research questions. In order to accomplish the objectives, eight hypotheses have been formulated and tested. We begin with the brief explanation of terminologies related to OL and OE. We introduced construct of OL and its antecedents with OE. Secondly, previous research relating to OL and effectiveness are outlined in order to develop a conceptual model. Third, systematic step by step research methodology has been used in order to achieve results. The hypotheses developed, have been tested using the results achieved. The conceptual model was evaluated with Structural equation modeling technique using the SPSS structural equation modeling add-on called AMOS (ver. 20). Finally, the results have been discussed and conclusions have been drawn accordingly. The limitations of this study have also been mentioned providing propositions for future research.

The Organisational Learning (OL)

OL is a process that provides the possibility to utilize previous learning for adapting an organization to the stable and unstable environment and help the organization continue its activities to achieve its goal (Shakiba & Savari, 2013). As per Tempelton, et. al., (2002), it is a number of organizational acts or it is a collective activity of knowledge acquisition, information distribution, information interpretation, and organizational memory that deliberately or subconsciously positively influences the activities driving organizational performance.

The Transactional Leadership (TLD)

TLD supports up to the cognizance of aggregate enthusiasm among the association's individuals and helps them to accomplish their common objectives. Speculations of TLD underline feelings, values and the significance of administration concentrated on empowering imagination and new thoughts in workers (Mutahar, Rasli, and Al-ghazali, 2015; García-Morales et. al., 2012). TLD is a contemporary, hands-on approach that helps one lead individuals and acquires change associations (Bhat et. al., 2013; Qureshi et. al., 2014; Qureshi et. al., 2015). Bass (1999) and Mutahar et. al., (2015) characterized TLD as the style of administration that prompts to the expanded cognizance of shared enthusiasm among the individuals from the association and it likewise helps them in accomplishing their OE.

The responsibility of OL lies with leaders. TLD has gathered fame, and most organizations emphasize on transformational leaders to gain the required level of organizational performance (M. K. Imran, Ilyas, & Aslam, 2016; Judge and Piccolo, 2004). TLD is practised when leader intellectually stimulates the subordinates, excites, arouses and inspires them to perform beyond their expectations. By providing a new vision, the transformational leader transforms the followers into people who want to self-actualize (Kondalkar, 2007).

The Organisational Culture (OC)

Organizational culture (OC) is not inborn. It has to be invented and later developed over a period of time. (Kondalkar, 2007). According to researchers, within any society, organisation members similarly engage in rituals, pass along corporate myths and stories, and use arcane jargon, and these informal practices may foster or hinder management's goal for the organisation (Baker, 1980; Deal and Kennedy, 1982; Peters and Waterman, 1982). Various private or public organisations come with their inherent culture to influence the organisational operation (Fard, Anvary Rostamy, & Taghillo, 2009). Griffin (1999) defined OC as the set of values, beliefs, behaviours, customs, and attitudes that help members of an organisation to understand what it stands for, how it does things, and what it considers important. Furthermore, Griffin (1999) also noted that OC determines the feel of the organisation. It is a powerful force that shapes the overall effectiveness and long-term success of the organisation (Popper and Lipshitz, 1998; Dartey-Baah, 2011).

The Organisational Effectiveness (OE)

The concept of OE is otherwise called organizational success or organizational worth which associates with goal attainment. According to Onwuchekwa (1999), an examination of effectiveness is to evaluate how well an organization is doing in relation to some set standards. Georgopoulos (Uche, Polytechnic, State, & Timinepere, 2012). Choosing appropriate measures of OE for human resource management research is

no easy task to do (Becker & Gerhart, 1996; Becker & Huselid, Dyer, 1984; Dyer & Shafer, 1998). But, the study (Henry, 2011) rarely justify their choice of measures, and, indeed, a degree of eclecticism may not matter much so long as the primary goal is to demonstrate plausible potential effects from investing in HR activities and/or strategies. In the 1980s, OE turned out to be more unmistakable and changed to be an idea of the status of a build (Henry, 2011). This idea is identified with issues, for example, the capacity of an organisation to get to and ingest assets and therefore accomplish its points (Federman, 2006). As Gigliotti (1987) said, a unit which is independently incapable as far as participation with whatever remains of the organisation is destined to disappointment. Cameron (1978) brought up that OE is the capability of the organisation at having admittance to the basic assets. In any case, McCann (2004) noted it as the paradigm of the organisation's effective satisfaction of their motivations through centre procedures (Ashraf, 2012). Vinitwatanakhun's (1998) concentrated that OE ought to concentrate on HR and associations and help people to accomplish abilities and self-regard so as to control the new environment and discover security and support. These subjective assessments of performance frequently have been used in organizational theory to evaluate OE and overall employee satisfaction (Abu-jarad, 2010). It has been observed that there is no generalised model of OE suitable for all organizations.

Research Questions

1. How the organizational learning, culture, effectiveness and transformational leadership approach is defined within the study domain?
2. Is there any association between organizational Learning and Organizational Effectiveness?
3. Do organizational culture and transformational leadership approach influence the relationship between organizational learning and organizational effectiveness?

Objectives of the Study

1. To understand how questionnaire items can explain OL, OC, OE and TLD.
2. To determine the relationship between OL and OE.
3. Determine if the relationship between OL and OE is mediated through TLD and OC.

Hypotheses of the Study

1. H1: TLD has significant relation with OE.
2. H2: OC has significant relation with TLD.
3. H3: OC has significant relation with OE.
4. H4: TLD has significant relation with OL.
5. H5: OL has significant relation with OE.
6. H6: OC has significant relation with OL.
7. H7: OL acts as a mediator between OC and OE.
8. H8: OL acts as a mediator in between TLD and OE.

2. METHOD AND PROCEDURE

The study followed cross-sectional approach. It included six big private telecom players in India (including Airtel, Reliance, Vodafone, Uninor, TATA Docomo, and Idea). The study applied the exploratory and causal method to answer the research questions. Stratified random sampling has been applied to collect survey data. Primary and secondary data have been used in order to ascertain antecedents and theories in the relevant context. 516 Questionnaire was sent to the respondents on Jan 10th 2016, after 3 months 319 responses were received were 11 responses had data missing and 4 were found unengaged. Therefore, finally, a total of 380 responses from managers, executives and non-executives were considered for the further analysis.

Questionnaires were sent by email to the participants. The questionnaires were comprised of two sections i.e., demographic information, and specific questions related to the items and variables. The second section of the questionnaire had 27 questions measuring TLD, OL, OE and OC. The 5-point Likert scale approach has been used where “1” represents “Strong Disagree” and “5” represents “Strongly Agree”.

The study investigates how the antecedents of OL, TLD, OC and OE explains the term itself (latent factor) and how these factors influence each other. The population had an average age of 34 (std. 10 yrs, range 32-50), 196 (51.58%) of the population were male, while 184 (48.42%) were female. The participants had an average experience of 12 years. The participants were from different levels of educational qualification. As Participants, we had: Bachelors 60.87%; Masters 28.32%; Professional certification 2.81%; Skilled executives 56.21%; Non-skilled executives 12.25% and Managers 31.54%.

3. DATA ANALYSIS

The data gathered has been analyzed using appropriate techniques. The outcomes from the different analysis are discussed thoroughly. The findings from these analyses that have been used to test the hypotheses and answer the research questions.

Data Screening

Received data were reviewed in order to screen the cases and variable respectively to identify the missing values, unengaged responses and outliers. Thus the integrity of data has been ensured. The use of blank count in MS excel made it missing value-free, authors verified all cases that did not respond properly. 7 missing values were found in the dataset and subsequently, removed. Researchers found the missing value in a Variable and replaced it by the Mean value technique.

Fake, duplicate or unengaged respondents compromise data quality and therefore should be dealt with accordingly to preserve data quality. To ensure a true reflection of the scenario the credibility of survey responses should be properly assessed — i.e., social desirability, careless/unengaged responding, and response inconsistencies (Cornell, Klein, Konold, & Huang, 2012).

The probable unengaged responses are identified by situations where the responses made by the participants are constant i.e. exactly same value for every single question. Standard deviation has been calculated for such scenarios. The value of standard deviation is very close to ‘0’ or equal to ‘0’ indicates that the responses made by respondents are exactly the same in each and every single question. These responses are not good for the further analysis. Generally, the value having greater value than 0.3 is

acceptable for the research. However, in this paper, the response having equal to 0.4 or greater than 0.4 is taken into consideration for better analysis and outcome. The authors deleted the 4 unengaged responses from the dataset.

An outlier is an observation which deviates so much from other observations as to arouse suspicions that it was generated by a different mechanism (Hawkins, 1991). This paper used variables measured on 5 points Likert scale. Therefore, the possibility of outliers has been nullified.

For analysing the data, authors used statistical analysis software Statistical Package for Social Sciences (SPSS 22.0) and its add-on named Analysis of Moment Structures (AMOS 20.0). Analysis techniques such as Reliability analysis, and Descriptive analysis, Structural Equation Modeling (SEM), Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) were applied in this study. As the previous study suggested, for SEM and CFA, AMOS 20.0 has been used in this study to evaluate associations among the various factors. As per Jořreskog and Sořrbom (1993, 1996, 1999) structural equation modeling permits, not just the assurance of relationship degree between factors additionally the examination of the chain of circumstances and end results. To evaluate overall model fitness, this study used the widely cited structural equation modeling fit indices such as Chi-square, CMIN/df, GFI, AGFI, NFI, RFI, IFI, CFI, RMSEA, and SRMR.

Confirmatory Factor Analysis

First order measurement model consists of 20 items. The model investigates how the items are associated with the respective latent factor. The confirmatory factor analysis conducted illustrates the loading achieved by each item and the overall model fitness compared against the widely accepted baselines of the fit indices. Table 1 below shows the achieved confirmatory factor analysis model fitness. The initial concept of a Four-factor model was confirmed after carrying out a confirmatory factor analysis (CFA). The model achieved an acceptable fit with χ^2/df (CMIN/DF) = 3.326, SRMR = 0.417, NFI = 0.917, RFI = 0.904, IFI = 0.941, TLI = 0.931 and CFI = 0.940. However, the indices achieved values less than the baseline for good fit i.e., 0.95. Therefore, it indicates that the model is not a very good fit and ‘modification indices’ technique can be applied to improve overall model fitness. As per the modern understanding, RMSEA is the most significant measure of fitness (Kenny, Kaniskan, & McCoach, 2014). The RMSEA achieved in this model indicates marginal (0.078) fit. Kenny (2014) suggested 0.05 as a cut-off for good fit. Considering the values achieved for these fit indices the authors decided to apply the modification to improve the model fitness. Figure 1 below shows the standardized loadings achieved for each item.

Table 1
CFA Indices -first order construct

<i>Model Fit indices</i>	<i>Achieved values</i>	<i>Baseline values</i>	<i>Remark</i>
χ^2	545.518	–	–
Df	164	–	–
χ^2/df	3.326	< 3 “good fit”, < 5 “marginal fit”, > 5 “poor fit”	Good Fit
Sig (<i>p value</i>)	.000	> 0.05	Poor Fit
NFI	0.917	≥ .95	Marginal
RFI	0.904	≥ .95	Marginal

Model Fit indices	Achieved values	Baseline values	Remark
IFI	0.941	≥ .95	Marginal
TLI	0.931	≥ .95	Marginal
CFI	0.940	≥ .95	Marginal
RMSEA	0.078	< = .05 “close approximate fit”, > .05 but < .08 “marginal fit”, > = .10 “poor fit”	Marginal
SRMR	0.417	≤ 0.5 indicate good fit	Good

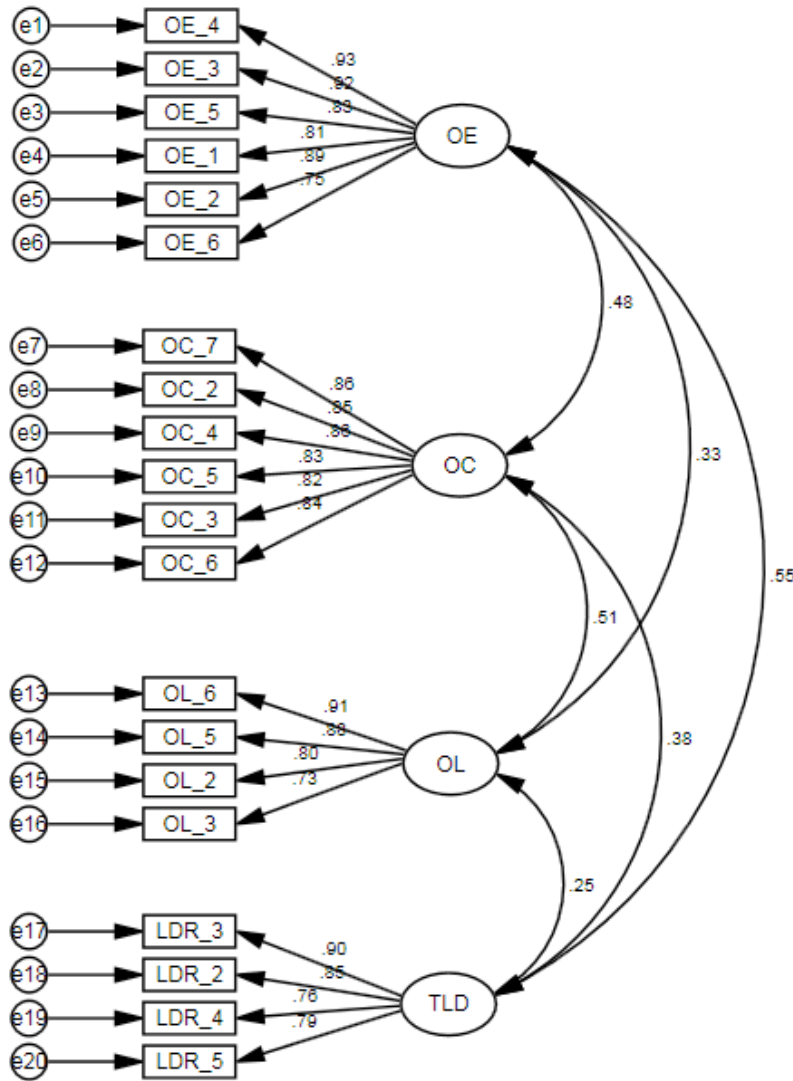


Figure 1: Confirmatory factor analysis - First order construct

With more than 200 cases of sample size, models regularly would not confirm a chi-square that demonstrates a solid fit ($p > 0.05$), so the low p -Value that was acquired from this investigation was not a matter of concern. Figure 2, showing the modification opportunities to improve the value of the variables and model fitness i.e. improving the model. Hence, through the use of ‘modification indices’ technique, the model has been adjusted to fit. The modification clearly indicates that the model has been improved and achieved an overall better fit. The modified results have been shown in Table 2.

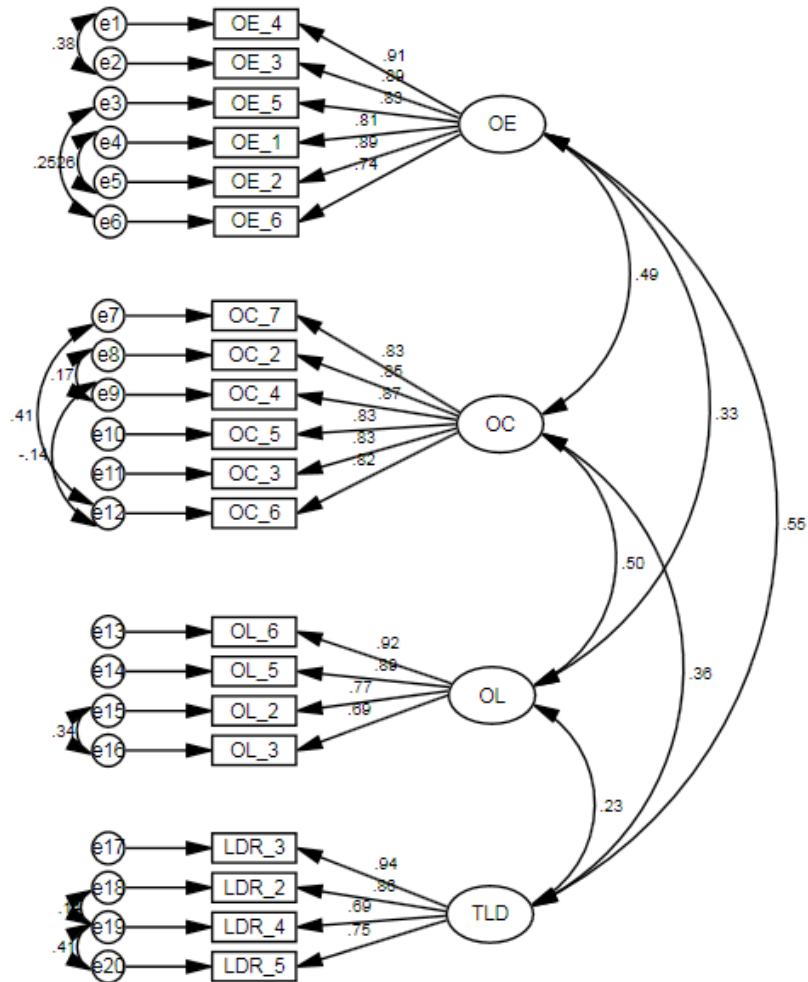


Figure 2: Confirmatory factor analysis - First order construct (after modification)

Table 2
CFA Indices –Second order construct

Model Fit indices	Estimated value	Absolute value	Remark
χ^2	295.477	–	–
Df	155	–	–
χ^2/df	1.906	< 3 “good fit”, < 5 “marginal fit”, > 5 “poor fit”	Good fit
Sig (<i>p value</i>)	.000	> 0.05	Poor fit
NFI	0.955	$\geq .95$	Good fit
RFI	0.945	$\geq .95$	Good fit
IFI	0.978	$\geq .95$	Good fit
TLI	0.973	$\geq .95$	Good fit
CFI	0.978	$\geq .95$	Good fit
RMSEA	0.049	< = .05 “close approximate fit”, > .05 but < .08 “marginal fit”, > = .10 “poor fit”	Good fit
SRMR	0.447	Values ≤ 0.8 indicate good fit	Good fit

Above Table 2, illustrates the model fit indices with their suggested threshold value. The model showed a better fit after necessary adjustments were made according to the recommendations by AMOS modification indices. During applying these modifications the theoretical concepts have also been considered to avoid misinterpretation. The Four-factor model was confirmed through a confirmatory factor analysis (CFA). Modified model achieved good fit with $\chi^2/df = 1.906$; NFI = 0.955, RFI = 0.965, IFI = 0.978, TLI = 0.973, CFI = 0.978; SRMR = 0.447 and RMSEA = 0.049. The CFA indices successfully met the requirements set by the threshold values. The model showed a great improvisation in RMSEA. The value of RMSEA 0.049 suggested that the CFA model containing these four factors is indeed achieved closed approximate fit.

The Average variance extracted (AVE) technique has been used to assess convergent validity (Liao, 2009; Santos & Brito, 2012; Škerlavaj, Hoon, & Lee, 2010; Leal-rodríguez, Eldridge, Luis, Leal-millán, & Ortega-gutiérrez, 2015; Baumgartner & Homburg, 1996; Fornell and Larcker, 1981). For AVE, a threshold value of 0.5 is suggested whereas the model achieved $AVE_{LDR} = 0.614$; $AVE_{OC} = 0.683$; $AVE_{OE} = 0.694$; $AVE_{OL} = 0.593$. Following table 3 summarizes factor loading (retained indicators), composite scale reliability (P_c), and average variance extracted (AVE). Researchers (Verlag, European, & Studies, 2016; Wang & Ellinger, 2008; Isabel, Aragón, Jiménez, & Valle, 2014; Hulland, 1999) stated that an item is said to be significant if it's factor loading is found to be greater than 0.7 so that the validity of the construct can be ensured. Table 3 below demonstrates the reliability and validity measurement for this model.

Table 3
Reliability and Validity Measurement

<i>Construct</i>	<i>Coding</i>	<i>Measures*</i>	<i>Factors loadings</i>	<i>Composite reliability (P_c)**</i>	<i>AVE***</i>
TLD	LDR2	Behaves in a manner thoughtful of my personal needs.	0.883	0.904	0.614
	LDR3	Inspire us to set high goals for ourselves.	0.965		
	LDR4	Challenges me to think about old problems in new ways.	0.754		
	LDR5	Expresses his/her confidence that we will achieve our goals.	0.732		
	OC	OC2	Sharing of innovative ideas with another department of my company is highly rewarded.		
OC	OC3	My office is appreciated innovative and creative ideas.	0.811	0.938	0.683
	OC4	Sharing of information is frequently discussed.	0.861		
	OC5	Sharing Business plans is a major way to solve problems.	0.848		
	OC6	Opportunities for the exploitation of knowledge are very high in my company.	0.803		
	OC7	Highly motivational environment push me to learn new things	0.902		
OE	OE1	My organization has improved its ability to anticipate potential market opportunities for new products/services.	0.830	0.940	0.694
	OE2	My organization has improved its ability to adapt quickly to unanticipated changes.	0.828		
	OE3	My organization has improved its ability to anticipate surprises and crises.	0.923		

Construct	Coding	Measures*	Factors loadings	Composite reliability (P_c)**	AVE***
	OE4	My organization has improved its ability to react to new information about the industry or market.	0.947		
	OE5	My organization has improved its ability to avoid overlapping development of corporate initiatives.	0.861		
	OE6	My organization has improved its ability to streamline its internal processes.	0.734		
OL	OL2	Bring customers' views into their decision-making processes.	0.844	0.910	0.593
	OL3	The existence of previous knowledge available to all employees.	0.734		
	OL5	Employees spend time building trust with each other.	0.888		
	OL6	Giving employees time to support their learning.	0.904		
Overall				0.943	

Source: SPSS output.

*LDR1, LDR6, OC1, OE7, OL1, OL4, OL7 have been deleted as they had loading less than 0.7. The AVE and P_c are calculated using the following formulae:

$$**AVE = \frac{\Sigma(\text{Loading})^2}{[\Sigma(\text{Loading})^2 + \Sigma(\text{Variance})]}, \quad ***P_c = \frac{\left(\sum_{i=1}^i \lambda_i\right)^2}{\left(\sum_{i=1}^i \lambda_i\right)^2 + \left(\sum_{i=1}^i 1 - \lambda_i^2\right)}$$

The modification of scales was done by removing following items LDR1 = 0.664; LDR6 = 0.612; OC1 = 0.662; OE7 = 0.670; OL1 = 0.627; OL4 = 0.685; OL7 = 0.670 as the factor loadings for these items were less than 0.7. Therefore, these items have been deleted and the rest were rearranged. Internal consistency was measured with Cronbach's alpha (α) where PcLDR = 0.904; PcOC = 0.938; PcOE = 0.940; PcOL = 0.910. Saxe and Weitz (1982) prescribed that after the expulsion of the non-legitimate items, every construct was revalidated by testing its items with their internal consistency, where items illustrated adequate internal consistency. Every measure had satisfactory unwavering quality and legitimacy. The development of each scale in this study has been shown in Table 3.

4. RESULTS

Correlation Between the Measures

Pearson correlation coefficients have been calculated using SPSS to illustrate the bivariate relations between TLD, OL, OE and OC. This magnitude of coefficients indicates the degree to what they are related to each other while the associated signs indicate nature (positive or negative) of relation (Fall, Chin, Peterson, & Brown, 2016; Meyer, 2015; Verlag et. al., 2016; Wiseman, 2007; Cohen, 1988). As per Cohen (1988), a coefficient of 0.10 to 0.29 indicates that there is a small relationship between the variables while 0.30 to 0.49 indicates a relationship with medium strength. Values with $\beta > 0.50$ indicate strong relationships.

Table 4 below, shows the results of Pearson's correlation between variables. Authors found the data to be normally distributed i.e. parametric assumptions were met and therefore it is suitable for Pearson correlation analysis.

Table 4
Alpha Coefficient, Descriptive Statistics, correlation coefficients, Results

<i>Variables</i>	<i>(N)*</i>	<i>(\bar{X})*</i>	<i>(σ)*</i>	<i>Pearson's correlation coefficients (r)</i>			
				<i>LDR**</i>	<i>OE**</i>	<i>OC**</i>	<i>OL**</i>
LDR	380	3.76	0.736	0.783			
OE	380	3.64	0.703	0.570	0.833		
Result	TL is significantly and positively correlated with OE. $r(376) = 0.570$; $P < 0.05$						
OC	380	3.56	0.791	0.409	0.502	0.826	
Result	OC is significantly and positively correlated with OL. $r(376) = 0.409$; $P < 0.05$						
Result	OC is significantly and positively correlated with OE. $r(376) = 0.502$; $P < 0.05$						
OL	380	3.78	0.802	0.305	0.369	0.546	0.770
Result	TL is significantly and positively correlated with OL. $r(376) = 0.305$; $P < 0.05$						
Result	OL is significantly and positively correlated with OE. $r(376) = 0.369$; $P < 0.05$						
Result	OC is significantly and positively correlated with OL. $r(376) = 0.546$; $P < 0.05$						

Source: *SPSS output, ** AMOS output.

The Pearson product moment correlation coefficient (r) was conducted to evaluate the Null hypotheses of the study. Preliminary analysis shows that there were no violations of the assumptions of normality, linearity or homoscedasticity. There was significant evidence to reject the all the null hypotheses of the study and based on Cohen (1988) we can conclude that there are strong bivariate relationships between TLD – OE, OC – OE, and OC – OL. Authors found medium strength correlation between OC – TLD, TLD – OL, OL – OE.

Structural Equation Modelling

The conceptual model for the study was tested using IBM-AMOS-20.0. Maximum likelihood (ML) method has been used here, in order to test the fitness of hypothetical model. The relationships between LDR, OC, OL, and OE have been checked and confirmed.

Table 5, provide evidence to prove the hypotheses developed earlier to assess the relations among variables in an interactive model. Figure 3 below, illustrates the standardized regression weights in a path model.

Table 5
Standardized coefficients in path analysis

<i>Hypotheses</i>	<i>Path between the variables</i>	<i>Standardised Coefficients (β)</i>	<i>P</i>	<i>Result</i>
H1	LDR-OE	0.32	.000	Supported
H2	OC-LDR	0.38	.000	Supported
H3	OC-OE	-0.27	.001	Supported
H4	LDR-OL	0.15	.1	Not Supported
H5	OL-OE	0.70	.000	Supported
H6	OC-OL	0.82	.000	Supported

Table 6 shows that the path model achieved GFI, AGFI, CFI, NFI, RFI, IFI, TLI $> .90$ and RMSEA, RMR $< .05$. Therefore, the model is a good fit (Mcquitty, 2004; Lin, 1998; Browne and Cudeck 1993).

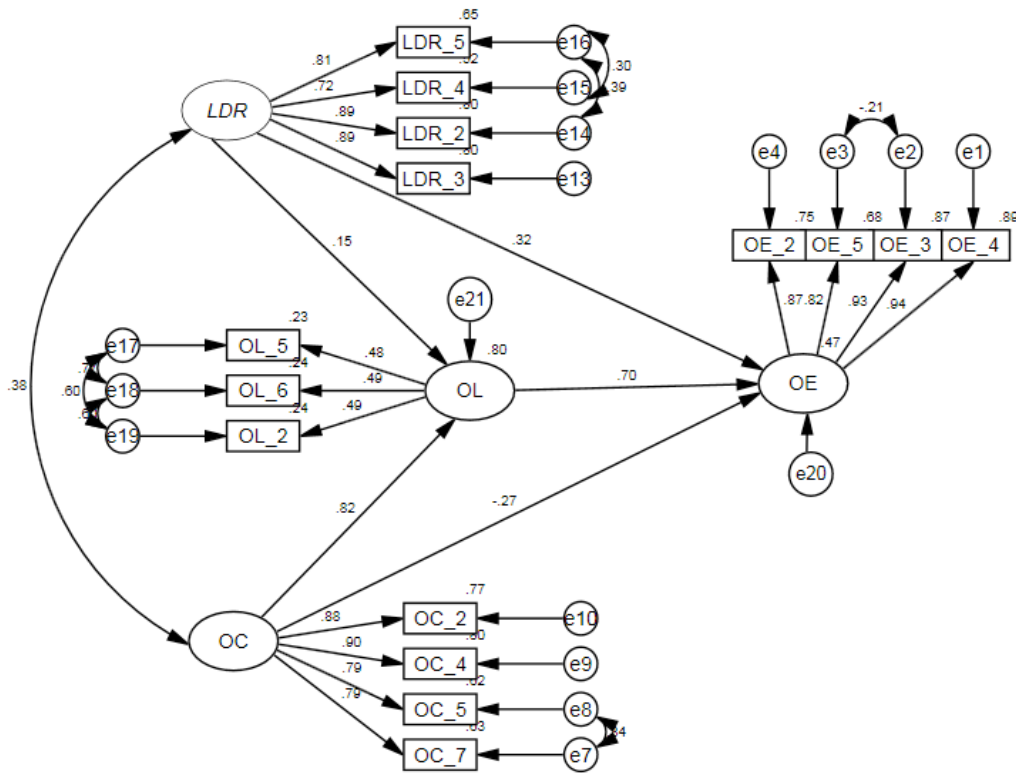


Figure 3: Path model

The model is a good fit as it meets the suggested threshold for important fit indices (Schreiber et. al., 2016; Castaneda& Rios, 2007; Mutahar et. al., 2015; Byrne, 1998 and Bollen 1989). According to Jenatabadi (2009) and Garson (2007), CFI and TLI measures equal to or greater than 0.9 signify good fit indices. Also, RMSEA less than 0.05 illustrates acceptable fit for this index (Byrne, 2011). While Chi-Square value should not be significant (p is expected to be >0.05) however, for models with greater than 200 samples it is quite natural to achieve a value <0.05 (Kenny, 2014). Table 6, indicate that the model achieved acceptable fit for Chi-Square/df (CMIN), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), Comparative fit index (CFI), Tukey-Lewis index (TLI), root mean square error of approximation (RMSEA) (Byrne, 2001) and explains each of these indices in greater detail.

The fitting indicators in Table 6 show how the theoretical models fit the experimental data. The standardized path coefficients for the model are presented in Figure 3. Based on previous researches on SEM model fitness (Khine, 2013; Byrne, 2001); Browne and Cudeck, 1993; Chang, 2011; Byrne, 1998; Bollen, 1989; Beyene and Shi, 2016 and Byrne, 2013) the model meets the criteria for comparing obtained values with the standard values. Therefore, it was concluded that the theoretical model is consistent with empirical data.

Multiple Mediations (Direct and Indirect effects):

Multiple mediation analysis has been conducted to investigate the mediation effect of OL between the relationship of TLD-OE and OC-OE. Before analyzing the mediation effects the relation between TLD-OE and OC-OE has been checked.

Table 6
Model fit indices in path analysis

Model Fit indices	Achieved values**	Baseline values	Remark
χ^2	109.094	-	-
Df	78	-	-
χ^2/df	1.399	< 3 “good fit”, < 5 “marginal fit”, > 5 “poor fit”	Good fit
Sig (<i>p value</i>)	0.012	> 0.05	Poor fit
GFI	0.964	$\geq .90$	Good fit
AGFI	0.944	$\geq .90$	Good fit
NFI	0.976	$\geq .95$	Good fit
RFI	0.968	$\geq .95$	Good fit
IFI	0.993	$\geq .95$	Good fit
TLI	0.991	$\geq .95$	Good fit
CFI	0.993	$\geq .95$	Good fit
RMSEA	0.032	≤ 0.05 “close approximate fit”, > 0.05 but < 0.08 “marginal fit”, > 0.10 “poor fit”	Good fit
RMR	0.020	≤ 0.5 indicate good fit	Good fit
SRMR	.0321	Values ≤ 0.8 indicate good fit	Good fit

** AMOS output

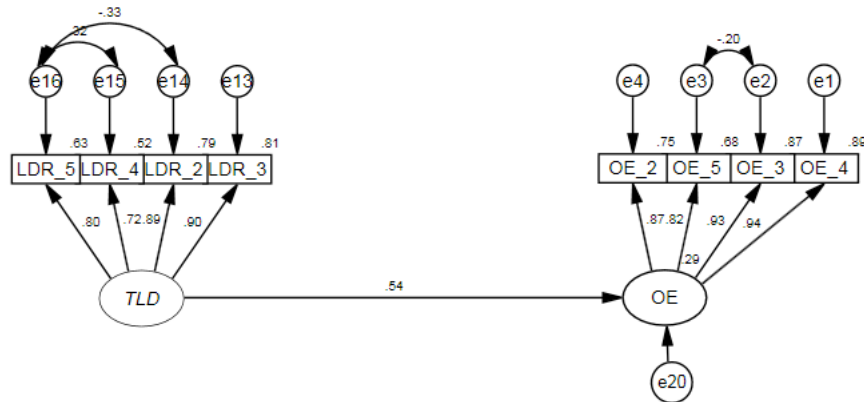


Figure 4: Relation between TLD and OE (no mediation)

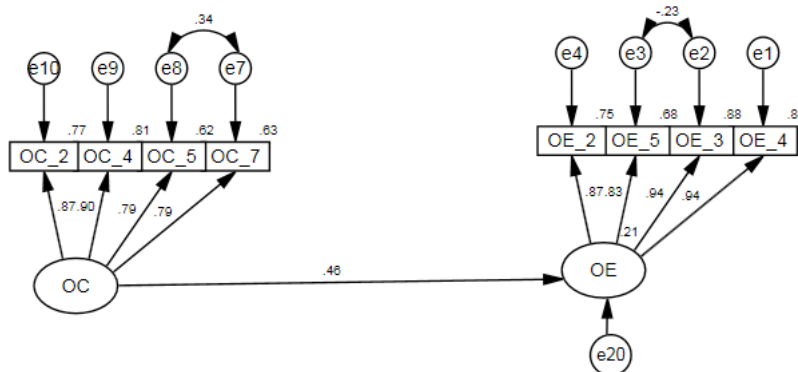


Figure 5: Relation between OC and OE (no mediation)

We can see that the relation between TLD-OE ($\beta = 0.54, p < 0.05$) and OC-OE ($\beta = 0.46, p < 0.05$) is significant. The following table illustrates the model fitness for TLD-OE and OC-OE.

Table 7
Model fitness for TLD-OE and OC-OE

Model Fit indices	Achieved value (TLD-OE)**	Achieved value (OC-OE)**	Baseline value	Remark
χ^2	28.089	23.416	-	-
Df	16	17	-	-
χ^2/df	1.75	.136	< 3 “good fit”, < 5 “marginal fit”, > 5 “poor fit”	Good fit
Sig (<i>p value</i>)	0.131	0.136	> 0.05	Good fit
GFI	.982	0.985	$\geq .90$	Good fit
AGFI	.959	0.968	$\geq .90$	Good fit
NFI	.989	0.991	$\geq .95$	Good fit
RFI	.981	0.985	$\geq .95$	Good fit
IFI	.995	.997	$\geq .95$	Good fit
TLI	.992	.996	$\geq .95$	Good fit
CFI	.995	.997	$\geq .95$	Good fit
RMSEA	.045	.032	≤ 0.05 “close approximate fit”, > 0.05 but < 0.08 “marginal fit”, ≥ 0.10 “poor fit”	Good fit
RMR	.016	0.013	≤ 0.5 indicate good fit	Good fit

** AMOS output

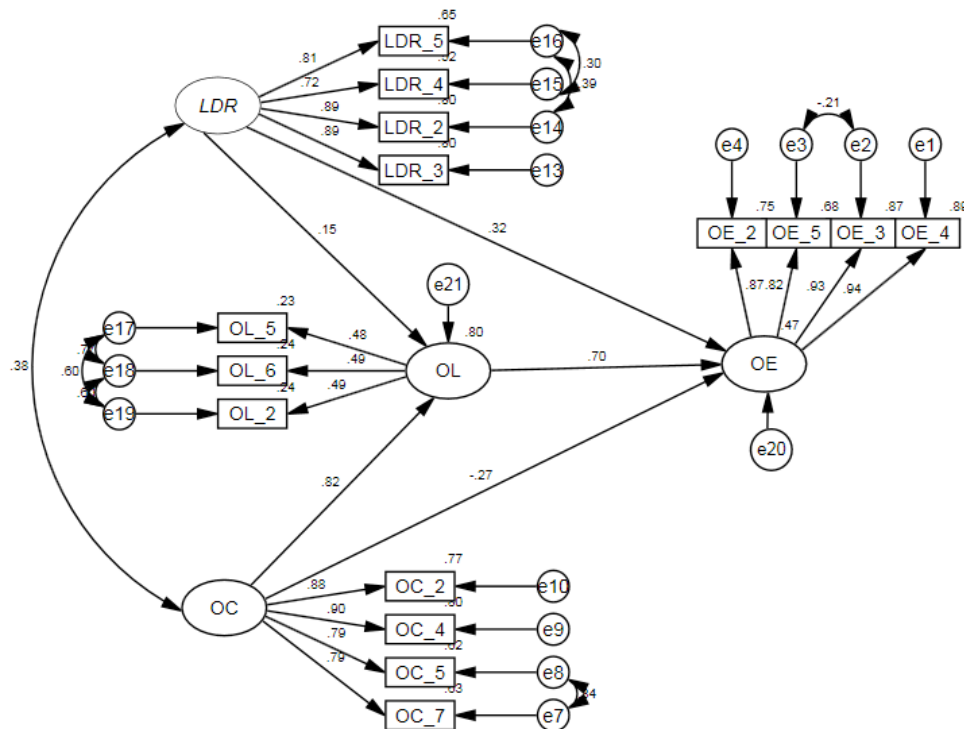


Figure 5: Relation between TLD-OE and OC-OE (OL as mediator)

We can see that OL, as mediator reduces, weakens the direct effect. However, the direct effects are still statistically significant at $p < 0.05$. Therefore, it can be concluded that there is a partial mediation effect for OL. Hence, it can be concluded that OL acts as a mediator between OC -OE and TLD-OE. Therefore, hypothesis H7 and H8 cannot be rejected.

Table 7
Mediation effects

<i>Hypotheses</i>	<i>Relationship</i>	<i>No mediation</i>	<i>OL as mediator</i>	<i>Mediation</i>	<i>Remark</i>
H7	OC-OE	0.46 ($p < 0.05$)	0.27 ($p < 0.05$)	Partial mediation	Hypothesis not rejected
H8	LDR- OE	0.54 ($p < 0.05$)	0.32 ($p < 0.05$)	Partial mediation	rejected

5. DISCUSSION

The primary purpose of this study was to answer three research questions. This study proposed and tested a conceptual model that hypothesized direct associations between OE and three variables: OL, TLD, OC. This study also hypothesized that OL may mediate between TLD – OE and OC – OE. As proposed, statistical analyses using structural equation modeling (SEM) revealed that OE had statistically significant relationships with all variables either directly or indirectly. All results were consistent with previous findings and theories. Further statistical analyses also suggested OL acts as a mediator between the independent variables and dependent variable.

TL and OE

The results of this study provide support for the proposition that TLD is positively related to OE, which is consistent with previous researchers. Mutahar et. al., (2015) and Bass (1999) characterized TLD to be an approach that prompts to expand awareness of shared enthusiasm among the individuals from their association and it additionally helps them in accomplishing their aggregate objectives (Mutahar et. al., 2015). Sampe, (2012) also found a positive relationship between TLD and OE. Many other researchers also demonstrated that transformational leadership approach does influence organizational effectiveness (Correa, Nybakk, 2012; García-Morales et. al., 2007; Beyene and Shi, 2016; Barrionuevo et. al., 2012; Menges et. al., 2011; Imran, Rizvi, & Ali, 2011; Gavrea, Ilies, & Stegorean, 2011).

The TLD is positively related to OE because employees think that their managers “Inspire them to set high goals for ourselves”, “Express confidence that they will achieve goals”. Well mannered, inspirational and confident leader create an environment that inspires learning and gets effective results. The efficient learning mentality tends to deliver efficiency. A transformational leader creates a learning environment. Good learning environment leads to effective delivery.

OC – TLD

The results of this study provide support for the proposition that Organizational culture is positively related to Transformational leadership approach, which is consistent with previous researchers (Sampe, 2012). TLD is basic for moulding OC (Amitay & Popper and Lipshitz 2005). TLD has been said to move a common vision, values, premium, trusts and dreams and a normal authoritative future (Amy, 2008) and to make a learning culture and to empower OL to happen. (García-Morales et. al., 2008, 2011; Tohidi & Seyedaliakbar, 2012; Hussein et. al., 2014; Rebelo et. al., 2011).

The OC is positively related to TLD because the employees think that through the “appreciate innovative and creative ideas” employee feels favourable, supportive, encouraging environment. Employees also feel a sense of closeness with the manager when their manager solve their personal problem. Thus employee gets attached to an organisation with emotionally. Highly motivational environment pushes employees to learn new things effectively.

OC – OE

Researchers demonstrated that the Organizational Learning significantly affects effectiveness (Afzali, Motahari, & Hatami-shirkouhi, 1948). The results of this study provide support for the proposition that OC is positively related to OE, which is consistent with previous research (Ra, Vuk, & Indihar, 2012). Researchers mentioned that OC has a great contribution to knowledge management due to the fact that culture determines the basic beliefs, values, and norms (Snyder, 1996; Leal-rodríguez et. al., 2015). High aspirations to transform the culture of the organization brings significant improvement to service and other key performance indicators. Culture is considered cornerstones and plays a crucial role to enhance the OE (Imran, Nisar & Ashraf, 2014).

The OC is positively related to OE as cultures like sharing of innovative ideas with another department can expedite progress. The company that appreciate innovative and creative ideas can create a learning environment. Sharing ideas with other generally inspire others to participate and put their suggestion. Opportunities for exploitation of knowledge are very high where there is a culture positive towards learning and development and it drives organizational effectiveness and delivery. Highly motivational environment push their employees to learn new things creating a sense of belongingness that keeps them motivated and generates effective results.

TLD – OL

Sample, 2012 discovered in his study that TLD positively influences OL. Sustainance of competitive advantage via the development of dynamic capabilities requires paying attention to OL – the ability of each organisation to learn faster than its rivals (Smith et. al., 1998; Lu, 2011). Researchers (Collis, 1994; Lu, 2011; Demetrius, 2012) considered higher-order capabilities to be the outcome of OL which creates or modifies a firm’s existing dynamic capabilities.

The TLD is positively related to OE because the employees think that their managers “Inspire them to set high goals for ourselves”, “think about old problems in new ways”. “Express confidence that they will achieve goals”. This kind of act by leader motivate to do something new, something in a different manner so that they may have the ability to not to tackle the problem but solve them in a different manner. Motivation lecture to employees boosts their morale and helps them to achieve higher goals and learn what they experience. Inspirational, problem-solving ability and confidence of the managers as a leader promotes learning and excellence.

The quality of a leader attracts the employee when the manager is flexible in nature and support their employees.

OL and OE

There is empirical evidence about the existence of a strong and statistically significant relationship between OL and OE (Hernaus, 2006). OL is important for bureaucracies just as for any other organisation since all

of them are competitors (Kropaite, 2009). OL is an environment of mutual development (organisational practices and individual competencies) comprising spatial and temporal areas in which it is possible to develop and learn as well as to change the organisational 'voice' and routines (Manley, Hough, & May-taylor, 2004; Argyris & Schön, 1996; Elkjaer, 2004; Zollo & Winter, 2003; Elkjaer, 2004).

The OL is positively related to OE because the employees think that the environment of the organisation supports them to learn new things. Inspire and motivate them to set a high-level target so that they can put their maximum efforts to the work done. Their managers should do their best to enhance OE by exercising "previous knowledge available to all employees based on their experience". Employees learn from their manager experience too by building an environment of trust. Managers in these organisations always support the employees who learn and use it in their work. Supporting environment helps an organisation to grow and making effective use of resources, hence, leads to OE.

OC and OL.

Culture is a notoriously elusive concept, despite being almost ubiquitous in the language of the social sciences and indeed in everyday life (Bishop et. al., 2006). A learning organization is a group of people who have woven a continuous, enhanced capacity to learn into the corporate culture (Kapp, 1999). Thesis & Kropaite, 2009 elaborated it to the extent that it is undertaken by members of an organisation to achieve organisational purposes. It takes place in teams or other small groups and is distributed widely throughout the organisation and embeds its outcomes in the organisation's system, structures, and culture (Snyder, 1996).

There should be a strong culture, trust, and transparency in all areas of the organisation to expedite learning (Ra et. al., 2012; Boreham, Morgan, Boreham, & Morganb, 2015; Snyder and Cummings, 1998; Huzzard, 2014; Senge, 1990; Boreham et. al., 2015; Pedler et. al., 1992; Škerlavaj et. al., 2010; Watkins & Marsick, 1993; Argyris & Schon, 1996 ; Fiol, & Lyles, 1985; Edmondson & Moingeon, 1998; Rtenblad, 2004). A culture for effective learning creates a greater capacity for adaptation and innovation. Higher levels of innovativeness are associated with cultures that emphasize learning, development, and participative decision making. The authors make recommendations for incorporating constructs related to innovation into research on market orientation and OL (Hurley et. al., 2015).

The OC is positively related to OL because the employees think that the culture is created by their managers by "Sharing of innovative ideas" and it gives them opportunities to participate and share their own views. Companies that appreciate innovative and creative ideas are creating a learning environment, sharing ideas with others and inspiring them to participate and put their suggestions. Creating an environment of exploitation of knowledge enhances learning opportunity. Hence, exploitation of knowledge, sharing innovative and creative ideas leads to effective learning.

OL – OC – OE

Analysis illustrated that OL acted as a mediator between OC and OE and influenced the relationship. OC provides the opportunity to share creative and innovative ideas with others that indicate the existence of learning as a group. Employees should learn about the consumer views and integrate it into their decision making and share it with other so that it leads to fast learning that saves time, energy and resources of the

organisation. The availability of previous knowledge helps them to learn what was already been implemented to solve the problems. These reduce repetition of task and waste of organizational assets. Sharing of previous knowledge with others make people aware as a whole so that they will think differently, create new ways to find the solution. This practice learning not only helps employees to learn and grow but gives effectiveness at the same time. The manager should spend the time to share knowledge, motivate employees to learn, create a sense of trust that leads to learning inside the organisation.

OL – Transformational Leadership – OE

The results obtained from the analysis of data reflects that OL acts as a mediator between TLD and OE. Transformational leaders inspire their subordinates to set high goals and think about new solutions to everyday problems in a way that leads to the organisational improvement. This approach builds the capability to anticipate potential market opportunities for new products/services. Leaders boost confidence in their subordinates that helps followers achieve their goals and leads to improvement of organisational ability to adapt quickly to unanticipated changes. Organization's learning capability influences how this leadership approach is implemented its visions. Organizations with better learning capability tend to achieve more effective results using transformational leadership. Hence, inspiring, challenging and confidence illustrated by the leaders leads to success but this process does depend on the organization's capability to learn in an effective manner.

6. CONCLUSION

The analysis and findings show that the conceptual model was a good fit within the domain of this study. Therefore, the proposed model with OL, OE, TLD and OC is capable of explaining their interactions. It was evident that the data was able to support relationships demonstrated by previous researchers. All the hypothesized relationships are significant. Organizational learning has been found to act as a mediator and influence the relation between TLD-OE and OC-OE. The primary contribution of the study was to validate the previous findings and check the efficacy of the telecommunication sector which has now become one of the most important parts of our daily business. Most of the Experimental research into OL has predominantly been directed in huge government and private undertakings in developing nations. A few similar studies have been carried out in developing countries like India. That gives us a window of opportunity to explore the concept in developing countries. A few social scientists have expressed organizational culture and transformational leadership approach as deciding factors for the effectiveness of an organization while considering organizational learning capacity also (Sampe, 2012; Bhatnagar 2006; Jyothibabu, Farooq et. al., 2010). Hence, efforts were made in this study to investigate the scenarios further.

Implication of the Study

This study focused on some components of organizational learning which are likely to influence organization's effectiveness most. Based on the basis of the result achieved, several implications for theory, practitioners, and the policy or decision maker are given below:

This study tried to fill in the gaps in literature especially regarding telecommunication and developing countries. This study treated OL in a composite and complete hypothetical model that instantaneously

measured the association between constructs that had been identified as heralds of OL– OC, LDR, and OL is positive and significantly related to OE.

This review recognised various elements of OL that might be utilised as the reason for exchange and administration association to improvement OE. This study reveals that OL having a positive and significant impact on the OE can help to anticipate potential market opportunities for new products/services and improved its ability to adapt quickly to unanticipated changes. Thus in order to achieve organizational effectiveness, organisational must support and create a learning culture and adopt transformational leadership style.

Limitations and Further Suggestions

There are some methodological confinements to this research. The issue of common method bias when managing self-report, perceptual information is exaggerated in the writing and might be invented by analysts (Spector, 2006; Liao, 2009). Utilizing a cross-sectional outline with surveys is likewise one of the restrictions of this review. A future research methodology that may beat this constraint is one that includes longitudinal reviews in which stream of learning and execution can be taken after some time. Notwithstanding the way of information, the generalizability of testing is another constraint of this review. The review leads to a particular in an Indian telecom organisation. Note that peruses ought to be careful while summing up the outcomes to various culture.

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