

Role of Entrepreneurial Orientation with In Small Firms: Analysis of The Mediating Effects of Transformational Leadership Styles

Ali Bin Nadeem

Centre of Excellence in Technology and Engineering Management

Misbah Hassan

Centre of Excellence in Technology and Engineering Management

Sabeen Bhatti

Centre of Excellence in Technology and Engineering Management

Ali Zafar

Centre of Excellence in Technology and Engineering Management

Mahrugh Sattar

Centre of Excellence in Technology and Engineering Management

Abstract

“Entrepreneurial orientation” is a term which has been used to indicate the strategies and policies which any organization adopts to execute some entrepreneurial actions. In order to understand the explicit role of entrepreneurial orientation and firm performance within small firms, some interlinked variables are also measured. Therefore the main purpose of the existing empirical research study is to examine the relationship of entrepreneurial orientation with the firm performance by checking the mediating role of transformational leadership style. Data were collected from 165 entrepreneurs who were running their small firms in Pakistan. To test the hypothesis PLS-SEM (Partial least square structural equation modeling) were used by operating smart PLS software. The results indicated that transformational leadership style mediated the relationship between entrepreneurial orientations. Some limitations and future directions has been explained at the end of the existing research.

Keywords: PLS-SEM, Entrepreneurial orientation, transformational leadership style

INTRODUCTION OF THE STUDY

Researchers of today are yet to reach the pinnacle of the entrepreneurial process and are still exploring and analyzing various scenarios encompassing a wide range of behaviors, after being driven by the influential work done by Miller (1983). This entrepreneurial process mainly focuses on studying the firms’ policies and strategies which are adopted by organizations from time to time in order to attain the firms’ increased productivity (Lumpkin & Dess, 1996; Rauch, Wiklund, Lumpkin, & Frese, 2009; Wales, Monsen & McKelvie, 2011). Entrepreneurship is naturally associated with the paradigms like environment, strategies, policies, leadership styles and therefore, as a result their connectivity to each other varies from firm to firm (Miller’s, 1983, p. 787). Cao, Simsek and Jansen (2012) explained that entrepreneurship and leadership has an intense impact on and are integrally associated with, the performance of the company. Implementation of the strategies and policies by the managers and employees would influence the linkage between entrepreneurial behavior and the succeeding performance (Vecchio, 2003; Moreno & Cassilass, 2008; Ren & Gue, 2011). This particular behavior of an entrepreneur is known as an entrepreneurial orientation. Entrepreneurial orientation has various facets which

includes influencing the learning curve, positive utilization of information, contentment with the firm, high growth in sales and increased return on investment (Covin, Green, & Slevin, 2006; Miller, 2011). Rauch et al., (2009) explained that firms having robust entrepreneurial orientation would interlink their strategies and policies with respect to the new opportunities and consequently perform well as compared to the companies that are not adopting to the trends of entrepreneurial orientation. Muchiri and McMurray (2015) elaborated that there is a need for further research, to explore the intervening relationship of leadership behaviors between EO and firm performance. Engelen, Gupta, Strenger and Brettel (2013) suggested that EO provides the explicit way to the companies so they could pursue some new opportunities in the industry and it was also vital to examine the influence of effective leadership on the execution of the EO. The literature explained that there is a need to examine and search the relationship of some company antecedents with the EO and then analyze how some of the internal behaviors of the organization act as a consequence of the intervention between EO and the firm performance (Muchiri & McMurray, 2015; De Clercq, Dimove, & Thongpapanl, 2010). A research has been particularly done on the explanation of the relationship between EO and leadership and accordingly it has been conceptualized that leadership has an impact on the EO and the firm performance (Muchiri & McMurray, 2015; Bouchard & Basso, 2011; Engelen et al., 2013; Hmieleski et al., 2012).

In order to understand the explicit picture of EO and the firm performance's interaction, one should have a clear understanding of the 'resource dependency theory', which was given by Pfeffer & Salancik in 1978. Another applicable theory is 'the resource based theory', which was given by Barney in 1991. With the help of these two theories, researchers can easily identify and get resources needed to attain and sustain entrepreneurial process. Resources within a firm not only influence the decision making function but also clarifies the role of manager's resources (Miller, 2011). These resources help activate the different aspects of EO which includes risk taking, innovation, pro-activeness, autonomy and aggressiveness (Miller, 2011). Managerial resources actually relate existing resources to the human capital which in turn affects innovation, induces pro-activeness and stimulates potential for risk-taking within the small firms (Muchiri & McMurray, 2015). According to the above mentioned scenarios, following questions spring into existence; Does transformational leadership style has any direct effects on firm performance? Does transformational leadership style (TL) have any direct positive effects on entrepreneurial orientation(EO)? Does EO has any direct effects on firm performance (FP)? Is there any mediating relation of EO between TL and FP? Research Objectives according to the above scenario are as follows: To examine the effect of TL on FP. To examine the effect of TL on EO. To examine the effect of EO on FP. And then to search the mediating role of EO between TL and FP. Researchers have suggested that in future, research should be conducted to find out the impact of a similar situation, on the interaction between effective leadership styles, entrepreneurial orientation, and firm performance (Muchiri & McMurray, 2015).

LITERATURE REVIEW

I. EO and Firm performance

The Resource Dependency theory (Pfeffer & Salancik, 1978) and the resource-based view (Barney, 1991), are the key parameters within which Entrepreneurial Orientation can be hypothesized, leading to a better insight to the EO-Performance Relationship. Observing EO in light of these two theories, provides researchers, assistance to unveil assets for its sustainability, the routes through which those resources would be acquired and recognize resources vital to facilitate a vigorous entrepreneurial process, (Miller, 2011, p. 884). The fact that the assets of a company can affect the processes of decision making, Miller (2011) believes and requires researchers to clarify the role of management's resource as a likely instigator for various components of EO, i.e. pro-activeness, taking risks, innovative endeavors, spirited belligerence and sovereignty). Managerial resource is also considered as an attractive resource as it causes people capital to be directly proportional to factors such as innovative capability, ignites pro-activeness, and motivates small enterprises to take risks.

The concept was first introduced by Miller in 1983, in which he claimed that entrepreneurial orientation is determined by a company's inclination towards taking risks, tendency of being innovative and a proactive approach towards decisions. Later on, Lumpkin and Dess developed and polished the EO concept a little further in 1996, adding to it, aggressiveness that is competitive and has an autonomous element. Covin and Slevan (1988, p. 218), while explaining the idea, defined EO as the degree to which top-level managers have willingness to take risks for business, to allow revolutionary change and innovative advancement to achieve a competitive edge for their company, and to allow them to aggressively compete other enterprises.

Dess and Lumpkin (2005, p. 147) hypothesized, entrepreneurial orientation to be 'a state of mind and a viewpoint about entrepreneurship that is imitated in a company's continuing progressions and corporate philosophy'.

According to Further, Miller (2011, p. 875) Entrepreneurial Orientation incorporated a procedure or 'a mode which allows entrepreneurs to act such that they create their "new entrance" – be that setting up a new business, a new invention or technological innovation, or a new niche' market'.

Whereas, Rauch et al. (2009) classified five intriguing EO scopes and the technique in which they are linked to entrepreneurial conduct in a firm.

The first category of scopes/dimensions is taking risks and is allied with the company's capability to involve in bold choices and activities, that is to jump into unfamiliar situations with no surety about its consequences and pledging major capital while you are at it.

The second aspect is categorized as the ability to be innovative. This category involves rigorous testing and trialing of novel products, processes or services that includes tech-governance/ leadership. The aspect of pro-activeness aims at determining instant prospects and tactical predictions in order to protect market's competitive edge above other businesses in relation to novel products and services.

Aggressiveness that is competitive in nature marks the fourth dimension and signifies the businesses' aptitude to participate in a belligerent activity and retain elevated heights of vigor and energy, to be able to exert for the firm to outshine, and eradicate, its opponents.

Competitive aggressiveness (focused towards competitors) and Pro-activeness (initiative taking aptitude towards clients) has a clear distinction as distinguished by Lumpkin and Dess (1996) The final scope of all dimensions was put forward by Rauch et al.'s in 2009, who believed that the EO model emphasizes on independence which is interrelated to leaders and their teams who are entrepreneurial in nature and enable autonomous acts thereafter producing new endeavors which are seen to realization. Thus this very aspect also denotes to entrepreneurial autonomy when evolving and realizing new concepts.

H1: Entrepreneurial orientation has direct positive impact on firm performance

II. EO and TL and FP

New ventures have its origins from the influence of data collection and its processing, managerial actions on the processes, workplace practices and decision makings within small enterprises (Bouchard & Basso, 2011; Lumpkin & Dess, 1996). Transformational Leaders are well-matched to justify the EO-Performance Relationship within small enterprises, according to the diverse literature that defines transformational leadership as one of the most effective type of leadership (Avolio & Bass, 2002, 2004; Yukl, 2013; Muchiri, Cooksey, & Walumbwa, 2012; Bass, 1985)

Transformational leaders always act in such a style that they always produce outclass outcomes as they focus on the dimensions or aspects of transformational leadership, either one or more of them while they are at it, as suggested by Bass and colleagues (Bass, 1985; Avolio & Bass, 2002, 2004)

Therefore, entrepreneurial behavior, attitude and EO of employees as well as their effectiveness in small enterprises will always be influenced by transformational leaders. Generally, it is envisioned that within small enterprises transformational leaders craft new ideas for the motivation of their employees and show confidence and passion in their philosophies. Furthermore, within these enterprises these leaders give importance to ethics and organizational values as they setup standards for accountability.

It is expected of these transformational leaders that they will motivate their followers to surpass self-centeredness and emphasis on united aims, reassure their obligation, exertion and performance for the well being of the firm, as proposed by Judge & Piccolo in 2004. With the perspective of small enterprises these leaders will stimulate ambitions, goals, aims, values and their inspirations by displaying their role as an ideal role model, who displays elevated levels of ethical and moral behavior.

Lastly these leaders will promote a sense of ownership and embed a sense of self-identification alongside of encouraging these employees to surpass the expectations of their performance (Walumbwa et al., 2011; Bass,1985). Thus, proving the value of examination of each aspect of the relationship of firm performance to transformational leadership with in small companies. The connection between the dimensions of EO and transformational leadership is evident by the various previous studies of Jung, Chow, & Wu, 2003; Jung et al., 2008; Ling et al.,

2008, in which an optimistic connection between innovation in an organization and the transformational leadership was found.

Additionally, in a study by Ling et al. (2008), it was found that the transformational heads were of great influence to the top management teams' (TMTs') behavioral incorporation, inclination towards risk, and delegation of duties which consequently persuaded corporate entrepreneurship.

Therefore, it is proposed that researches should be directed in such a way that through outcomes of transformational leadership on organizational performance can be examined. Secondly, the relationship between EO and transformational leadership should also be examined. Engelen et al., (2013) suggested that articulation of a vision, to provide a suitable model, to have a higher level of performance expectations and to show support as a leader, being the four aspects of transformational leadership affects EO and firm performance positively. Not only that it was also observed that the performance outcomes of EO were greatly high upon exhibition of utmost level of transformational behaviors by the top level management. Thus, it is justified to conclude that greater the level of transformational behavior of the leadership, more positive will be the relationship of all indicators of the company's high performance and therefore more strengthen would be the entrepreneurial orientation as well. Whereas, lack of transformational behavior in leaders will weaken the bond between EO and the organization's performance.

H2: Transformational leadership will have direct positive effects on firm performance.

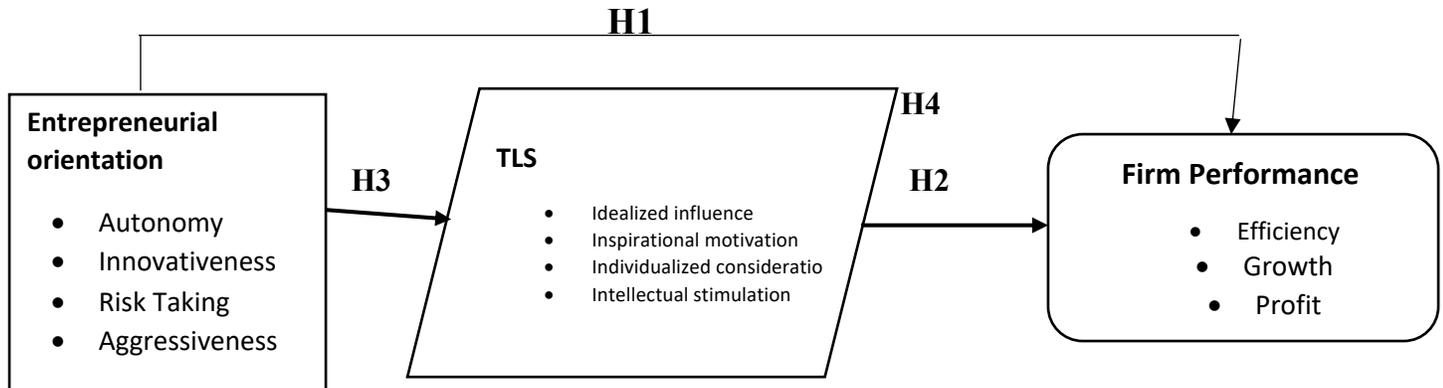
H3: Entrepreneurial orientation will have direct positive effects on transformational leadership

The moderating and mediating impacts between EO, Firm Performance and leadership has a worth (see also Li, Zhao, Tan, & Liu, 2008). This research brings together 2 main flows of small businesses' study. It implies the necessity for a very systematic analysis for the influence of EO on performance, effectiveness of small enterprises and other leadership styles' impact. There is a necessity to analyze other vital variables that could have a mediating or moderating connection to EO and the performance of the firm (Eddleston, 2008; Muchiri and McMurray, 2015). There is definitely a great importance and a value for studying the rather latest developments in the concepts of leadership and that too effective and their impact on the performance of small companies and their entrepreneurial orientation (Muchiri & McMurray, 2015).

H4: Transformational leadership style mediates the relationship between entrepreneurial orientation and firm performance.

Hence, according to the literature the framework would be so explicit:

FRAMEWORK:



METHODOLOGY

Sample

Sample size used in this study is 255. Sampling technique used in the existing research paper is convenient sampling and data has been collected from entrepreneurs running their small firms in Pakistan. The sample consisted of 65% males and 35% females, whereas, their age groups range from 30 to 40 years.

Measures

In this research paper, entrepreneurial orientation was measured in accordance to the items adapted from Lumpkin, & Dess, 2001. Transformational leadership style was examined with the items adapted from Bass, B. M., & Avolio, B. J. (1997) and firm performance items were measured with the assistance of items taken from (Li a, Huang Tsai ,2008).

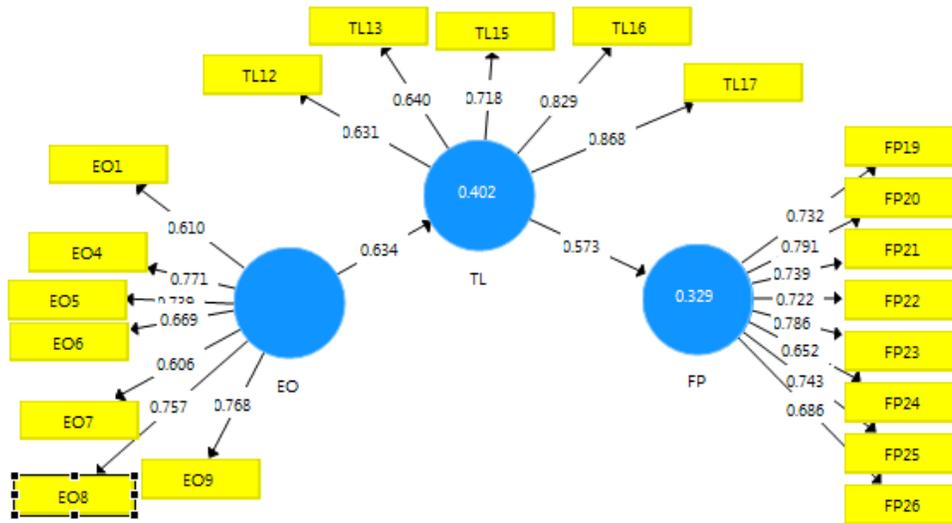
For all the items Five points Likert type scale was used, i.e., from strongly disagree = 1 to strongly agree = 5.

RESULTS

The present research paper is followed by two main modeling processes known as measurement model in which confirmatory factor analysis has been done in order to check the outer model with the help of reliability and validity (Anderson & Gerbing, 1988). Second modeling process is known as the structural equation modeling in which the complete inner model is examined and hypothesis testing is done (Hair, Anderson & Black, 1998). Both the models are modeled using the Smart PLS software as suggested by Lowry and Gaskin (2014) and a complete statistical method is stated as the partial least square structural equation modeling (PLS-SEM) (Lowry & Gaskin, 2014).

I. Measurement Model:

Figure 1:



Measurement model of the complete framework

For the measurement of outer model. Confirmatory Factor Analysis (CFA) has been done in order to get the following measurements; strength between latent and observed variables, the item's consistency with the help of reliability and validity (Shumacher & lomax, 1996). Confirmatory factor analysis gave the factor loadings of the items (Lowry & Gaskin, 2014):

Table1: CFA (N=165)

| Variables | Factor loadings |
|-----------|-----------------|
| EO | |
| EO1 | 0.61 |
| EO4 | 0.77 |
| EO5 | 0.72 |
| EO6 | 0.61 |
| EO7 | 0.69 |
| EO8 | 0.757 |
| EO9 | 0.768 |
| TL | |
| TL12 | 0.63 |
| TL13 | 0.64 |
| TL15 | 0.71 |

| Variables | Factor loadings |
|------------------|------------------------|
| TL16 | 0.82 |
| TL17 | 0.86 |
| | FP |
| FP19 | 0.73 |
| FP20 | 0.79 |
| FP21 | 0.73 |
| FP22 | 0.72 |
| FP23 | 0.78 |
| FP24 | 0.65 |
| FP25 | 0.74 |
| FP26 | 0.68 |

The above mentioned table shows the factor loading of the items within the constructs. Factor loadings are examined with the help of the algorithm command in the PLS software and a threshold is set by the researchers that is above 0.5 and items having value less than 0.5 are consequently excluded (Shumacher & Lomex, 1996; Lowry & Gaskin, 2014). In table above, all items have a value greater than 0.5 and some of the items are excluded as their values were less than 0.5 (EO11, EO3, EO2, EO10, TL 14, FP18).

II. Reliability and Validity:

Table 2, describes the reliability and validity in terms of chronbach alpha, composite reliability and average variance extracted. Chronbach alpha provides the internal consistency of the items and composite reliability provides the actual loading of the items (Hair et al., 1998; Ma & Agarwal, 2007). Average variance extracted provides the percentage of variation in the needed variable contributed by the specified indicators (Chin & Newsted, 1999).

Reliability and validity (N= 165)

| variables | Chronbach Alpha | Composite reliability | Average Variance Extract (AVE) |
|-----------|--------------------|--------------------------|---|
| EO | 0.832 | 0.873 | 0.55 |
| TL | 0.876 | 0.859 | 0.537 |
| FP | 0.79 | 0.90 | 0.55 |

The table above shows the standard values with the help of which researchers will able to confirm the accuracy of the reliability and construct validity. Chin & Newsted (1999) gave the threshold value of about 0.5 which showed that validity is good. All alpha values are also greater

than 0.6 which means that it has a good internal consistency (Lowry & Gaskin, 2014). Values of composite reliability should be at least 0.7 (Ma & Agerwal, 2007).

III. Structural Equation Modeling (For Testing Hypotheses of Direct Relationships):

After testing the measurement model with the help of algorithm, bootstrapping will be done to get the path coefficients which are in terms of T-values. T-values are the standards to identify the acceptance or rejections of the hypothesis (Lowry & Gaskin, 2014).

Table 3:

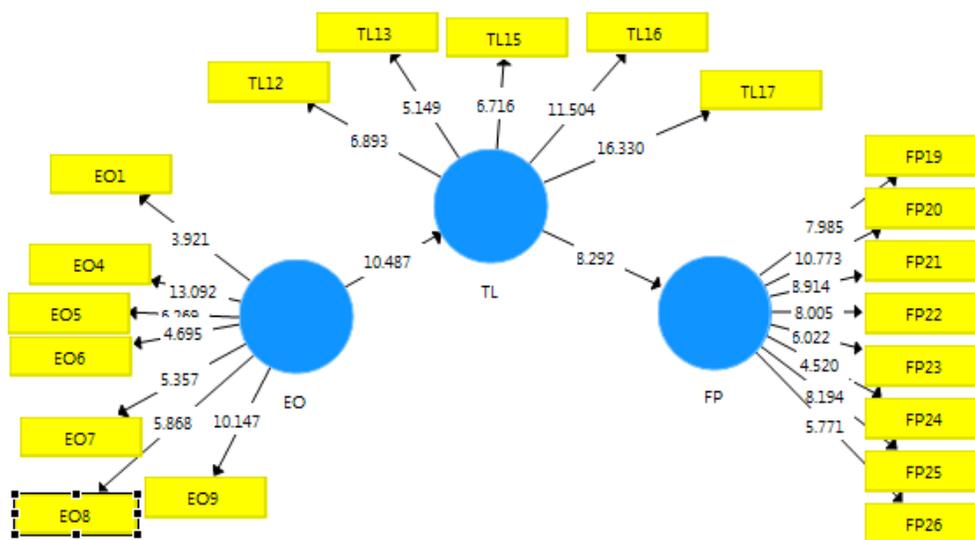
Path Coefficients (N= 165)

| s | Hypothes | Sample mean | Standard deviation | T-statistics | P- Value |
|---|----------|-------------|--------------------|--------------|----------|
| | EO – TL | 0.768 | 0.072 | 10.4 | 0.000 |
| | TL- FP | 0.686 | 0.082 | 8.2 | 0.000 |
| | EO- EP | 0.699 | 0.06 | 5.4 | 0.000 |

All values are significant at p-values less than 0.001

After applying bootstrapping, hypotheses are checked with the help of T- values, which are greater than 2 (Leech & Morgan, 2005). A complete structural model is given below:

Figure 2: Structural Model of Direct Relationships

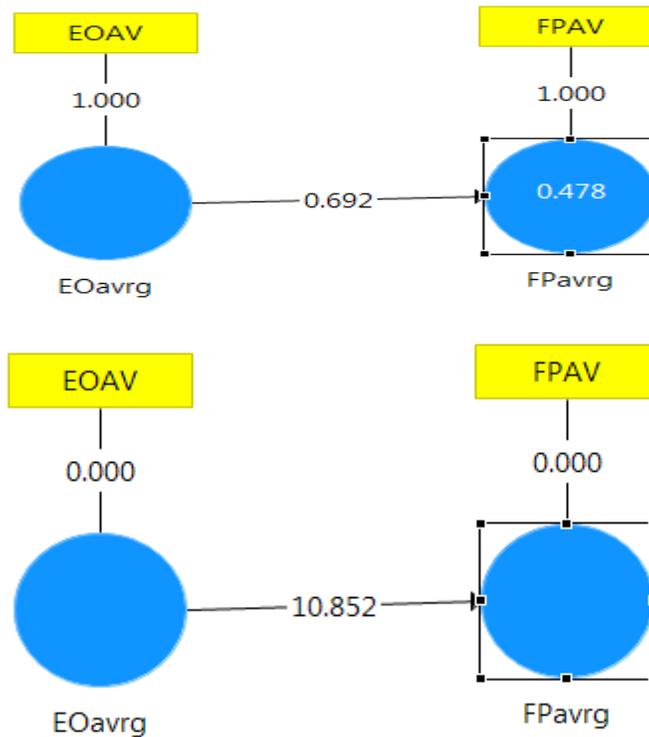


IV. Mediation Hypothesis testing:

In order to check the mediation hypothesis, Lowry and Gaskin's (2014) method has been adopted. In smart PLS mediation process, first the direct relationship are checked and its beta value is subsequently noted down. Entrepreneurial relationship is then regressed with the firm performance and then the other model is executed with the addition of mediating variable in it.

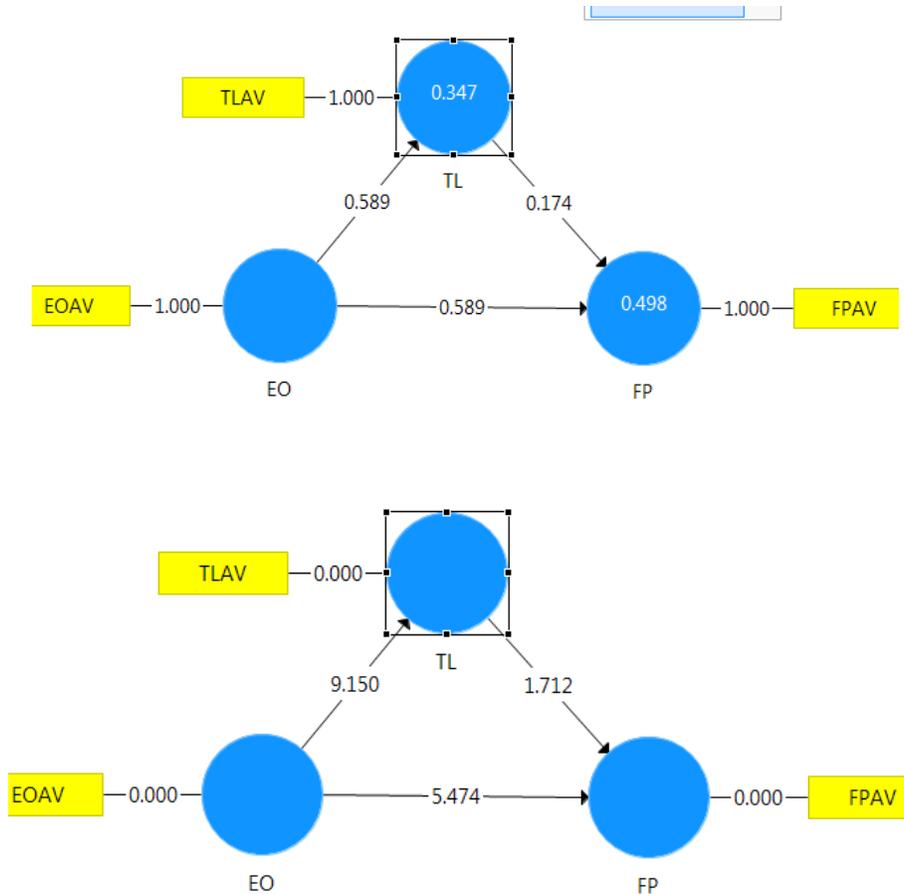
a. First model:

Here EO is regressed with the firm performance. This shows the beta value of about 0.69. And a T-value of 10.852, which is significant and can be seen in the figures below;



b. Second Model:

In second model, EO and FP are checked in the presence of mediating variable which is transformational leadership style and then the T- value is checked. Figures are given below;



These figures show that by adding mediating variable, the value of the beta coefficients are reduced. Beta coefficients reduce from 0.69 to 0.5. but the T-value remains significant which is greater than 2. It shows that mediation exists but its partial mediation (Lowry & Gaskin, 2014). The complete table is given below:

| PLS Algorithm | | | Bootstrapping |
|---------------|---------|-----------|--------------------|
| Model 1 | β | T- Values | Significance level |
| EO- FP | 0.69 | 10.85 | 0.000 |
| EO-TL-FP | 0.54 | 3.5 | 0.000 |

Significance level is $p \leq 0.001$

DISCUSSION

According to the results, entrepreneurial orientation is the soul of the small firms as it helps these firms to take initiating steps in their businesses (Miller’s, 1983). Presence of entrepreneurial orientation within the small firms automatically leads them towards the better firm performance

with respect to the net profit, or return on the investment. First hypothesis states that entrepreneurial orientation has a positive and a direct effect on the firm performance which is supported with the prior studies (Lumpkin & Dess, 1996). There is a deep relationship between transformational leadership behavior and the firm performance (Muchiri & McMurray, 2015). Second hypothesis explains that Transformational leadership style has a positive and a significant relationship with the firm performance, which is backed and supported by the literature available on the subject (Mchimiri & McMurray, 20015; Gupta et al., 2013). The third hypothesis states that EO has a direct and a significant relationship with transformational leadership behavior, which can also be verified by the literature (Jung et al., 2003; Ling et al., 2008). The last hypothesis states that transformational leadership style mediates the relationship between EO and FP. Results showed that transformational leadership style actually partially mediates the relationship between entrepreneurial orientation and firm performance.

LIMITATIONS AND FUTURE DIRECTIONS

Present studies focus on the small firms of Pakistan. Future researchers may replicate the present study in any other sector or in any other case study. This is a cross-sectional study and future researcher may go into depth by exploring more of its related domains. Many other new mediating and contextual variables such as organizational commitment can also be added and analysed. Researchers can further elaborate the research avenues by adding many other leadership styles and behaviors like transactional leadership style, and spiritual leadership style etc.

CONCLUSION

Small firms within Pakistan should mold their strategies and policies in accordance to the new available opportunities. This not only positively effects Firm Performance but also justifies the use of transformational leadership style. As employees are mostly influenced by their transformational heads/leaders, who assist them to be inclined towards risk taking and allocates responsibilities that subsequently convince them towards corporate entrepreneurship.

References

- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, 103(3), 411.
- Avolio, B. J., & Bass, B. M. (2002). *Developing potential across a full range of leadership: Cases on transactional and transformational leadership*. Mahwah, NJ: Lawrence Erlbaum.
- Avolio, B. J., & Bass, B. M. (2004). *Multifactor leadership questionnaire: Third edition manual and sampler set*. Redwood City, CA: Mind Garden.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of*

- Management, 17(1), 99–120.
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York, NY: Free Press.
- Bass, B. M., & Avolio, B. J. (1997). *Full range leadership development: Manual for the Multifactor Leadership Questionnaire* (pp. 43-44). Palo Alto, CA: Mind Garden.
- Bouchard, V., & Basso, O. (2011). Exploring the links between entrepreneurial orientation and intrapreneurship in SMEs. *Journal of Small Business and Enterprise Development*, 18(2), 219–231.
- Cao, Q., Simsek, Z., & Jansen, J. (2012). CEO social capital and entrepreneurial orientation of the firm: Bonding and bridging effects. *Journal of Management*. doi:10.1177/0149206312469666
- Chin, W. W., & Newsted, P. R. (1999). Structural equation modeling analysis with small samples using partial least squares. *Statistical strategies for small sample research*, 2, 307-342.
- Covin, J. G., Green, K. M., & Slevin, D. P. (2006). Strategic process effects on the entrepreneurial orientation- sales growth rate relationship. *Entrepreneurship Theory & Practice*, 30(1), 57–81.
- Covin, J. G., & Slevin, D. P. (1988). The influence of organization structure on the utility of an entrepreneurial top management style. *Journal of Management Studies*, 25(3), 217–234.
- De Clercq, D., Dimov, D., & Thongpapanl, N. (2010). The moderating impact of internal social exchange processes on the entrepreneurial orientation–performance relationship. *Journal of Business Venturing*, 25(1), 87–103.
- Dess, G. G., & Lumpkin, G. T. (2005). The role of entrepreneurial orientation in stimulating effective corporate entrepreneurship. *Academy of Management Executive*, 19(1), 147–156.
- Dess, G. G., Lumpkin, G. T., & Covin, J. G. (1997). Entrepreneurial strategy making and firm performance: Tests of contingency and configurational models. *Strategic Management Journal*, 18(9), 677–695.
- Eddleston, K. A. (2008). The Prequel to family firm culture and stewardship: The leadership perspective of the founder. *Entrepreneurship Theory & Practice*, 32(2), 1055–1061.
- Engelen, A., Gupta, V., Strenger, L., & Brettel, M. (2013). Entrepreneurial orientation, firm performance, and the moderating role of transformational leadership behaviors. *Journal of Management*. doi:10.1177/ 0149206312455244
- Hair, J. F., Andreson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis*. 5th (ed) Prentice-Hall Inc. Unites States of America.
- Hmieleski, K. M., Cole, M. S., & Baron, R. A. (2012). Shared authentic leadership and new venture performance. *Journal of Management*, 38(5), 1476–1499.

- Judge, T. A., & Piccolo, R. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), 755–768.
- Jung, D., Chow, C.W., & Wu, A. (2003). The role of transformational leadership in enhancing organizational innovation: Hypotheses and some preliminary findings. *Leadership Quarterly*, 14(4), 525–554.
- Jung, D., Wu, A., & Chow, C. W. (2008). Towards understanding the direct and indirect effects of CEOs transformational leadership on firm innovation. *Leadership Quarterly*, 19(5), 582–594.
- Leech, N. L., Barrett, K. C., & Morgan, G. A. (2005). *SPSS for intermediate statistics: Use and interpretation*. Psychology Press.
- Li, Y., Zhao, Y., Tan, J., & Liu, Y. (2008). Moderating effects of entrepreneurial orientation on market orientation- performance linkage: Evidence from Chinese small firms. *Journal of Small Business Management*, 46(1), 113–133.
- Li, Y. H., Huang, J. W., & Tsai, M. T. (2009). Entrepreneurial orientation and firm performance: The role of knowledge creation process. *Industrial marketing management*, 38(4), 440-449.
- Ling, Y., Simsek, Z., Lubatkin, M. H., & Veiga, J. F. (2008). Transformational leadership's role in promoting corporate entrepreneurship: Examining the CEO-TMT interface. *Academy of Management Journal*, 51(3), 557–576.
- Lowry, P. B., & Gaskin, J. (2014). Partial least squares (PLS) structural equation modeling (SEM) for building and testing behavioral causal theory: When to choose it and how to use it. *IEEE Transactions on Professional Communication*, 57(2), 123-146.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135–172.
- Lumpkin, G. T., & Dess, G. G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of business venturing*, 16(5), 429-451.
- Ma, M., & Agarwal, R. (2007). Through a glass darkly: Information technology design, identity verification, and knowledge contribution in online communities. *Information systems research*, 18(1), 42-67.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770–791.
- Miller, D. (2011). Miller (1983) revisited: A reflection on EO research and some suggestions for the future. *Entrepreneurship Theory & Practice*, 35(6), 873–894.
- Moreno, A. M., & Cassilass, J. C. (2008). Entrepreneurial orientation and growth of SMEs: A causal model. *Entrepreneurship Theory & Practice*, 32(3), 507–528.
- Muchiri, M. K., Cooksey, R. W., & Walumbwa, F. O. (2012). Transformational and social

- processes of leadership as predictors of organizational outcomes. *Leadership and Organization Development Journal*, 33(7), 662–683.
- Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource-dependence perspective*. New York, NY: Harper & Row.
- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory & Practice*, 33(3), 761–787.
- Ren, C., & Guo, C. (2011). Middle managers' strategic role in the corporate entrepreneurial process: Attention-based effects. *Journal of Management*, 37(6), 1586–1610.
- Schumacher, R. E., & Lomax, R. G. (1996). *A beginner's guide to SEM*. New Jersey: Mahwah.
- Muchiri, M and McMurray, A 2015, 'Entrepreneurial orientation within small firms: a critical review of why leadership and contextual factors matter', *Small enterprises research: the journal of SEAANZ*, pp. 1-15.
- Vecchio, R. (2003). Entrepreneurship and leadership: Common trends and common threads. *Human Resource Management Review*, 13(2), 303–327.
- Wales, W. J., Monsen, E., & McKelvie, A. (2011). The organizational pervasiveness of entrepreneurial orientation. *Entrepreneurship Theory & Practice*, 35(5), 895–923.
- Walumbwa, F. O., & Hartnell, C. A. (2011). Understanding transformational leadership-employee performance links: The role of relational identification and self-efficacy. *Journal of Occupational and Organizational Psychology*, 84(1), 153–172.
- Yukl, G. A. (2013). *Leadership in organizations* (8th ed.). Upper saddle River, NJ: Pearson Prentice Hall.