



Role of Emotional Intelligence in Development of Entrepreneurial Effectuation

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Abstract- This Study aims to explore the link between emotional intelligence (EI) and entrepreneurial effectuation among university students. The methodology used was structural equation modeling with 204 participants. A significant relationship was found between Emotional Intelligence and entrepreneurial effectuation of students in recognizing new venture creation. Model of effectuation theory and Emotional Intelligence provided the basis of our study. The study was based on single university (University of Balochistan) only which limits the generalizability of this research. This study has practical implications as it describes the relationship between emotional intelligence and effectuation. It becomes evident that having the quality of emotional intelligence, students will be able to discover their entrepreneurial potential and engage in socio economic activities. This is especially important for a province like Baluchistan, which has a large number of unemployed youth. Findings of this study revealed that development of entrepreneurial skills will enhance the ability to take initiatives for new venture. Thus, for the development of this underprivileged area of Balochistan, the emotional intelligence of youth is necessary for the development of entrepreneurial effectuation. Particularly in contexts where students' involvement in entrepreneurship is the dominant driver for boosting the economy of Balochistan. The paper presents an understanding of how EI develops the entrepreneurial effectuation.

Keywords: Entrepreneurship, Venture creation, Emotional Intelligence, Effectuation.

I. INTRODUCTION

Entrepreneurship has gained widespread importance globally. The public and private sector has not been able to engage the youth in economic activity. For the social and economic welfare of state entrepreneurial growth is essential. The university based entrepreneurship programs are considered important for the promotion of entrepreneurship among students. The effectuation based entrepreneurship has gained widespread popularity as it helps the protagonists to start with the means available and enables to work with uncertainty. Our study is based on integrated model of effectuation theory of Saras Sarasvathy's (2001), model of emotional intelligence of Mayer & Salovey (1997). Some of the studies shown that EI impact on several variables, contrary to that association of EI with entrepreneurial effectuation is bounded. Earlier research carried out in different settings (Sarasvathy, 2001; Zhao et al., 2010). Likewise, a study of Obschonka, Silbereisen, & Schmitt (2010) predicted role of psychological traits in developing entrepreneurial intentions.

Effectuation is a thinking process that helps entrepreneurs to recognize the opportunity and startup of new venture. Sarasvathy's (2001) explored effectuation with sense of using scarce resource which get the significant importance in making decision. Effectuation based on the principle of balancing the resources and actions.

Norms of Effectuation assists entrepreneurs to recognize the uncertainty of environment. In the literature of entrepreneurship, the personal characteristics is much explored area (Goleman, Boyatzis, & McKee, 2002; Sarasvathy & Kohta 2003). Nonetheless, a theoretical model depicting the relationship between emotional intelligence domain and entrepreneurial effectuation was not drawn yet.

Entrepreneurial literature evident the different individual characteristics develop the entrepreneurial behaviors in opportunity recognition (Shane & Venkataraman, 2000). In this context EI proven as a most significant trait influencing choice of careers (Emmerling & Cherniss, 2003). The link of EI with leadership effectiveness (Cherniss, 2001) organizational effectiveness (Goleman et al., 2002); training and development (Ashley, Vesely, Saklofske, & Nordstokke, 2014) and most latest study of (Ingram, Peake, Stewart, & Watson, 2017) highlighted the effect of EI on entrepreneurship construct. Popularity of EI in the literature of psychology and management is quite significant (Malik, Karim, Bibi, & Muhammad, 2015; Mayer, Roberts, & Barsade, 2008; Miao, Humphrey, & Qian, 2017b, c). While predicting

the role of EI on effectuation of entrepreneurship, this has been assumed that the construct of EI is significant for the development of skills to identify the career opportunities. EI may influence the perception of effectuation and entrepreneurship (Mikolajczak, Luminet, & Menil, 2006).

In entrepreneurial context people with High level of EI tends to be more active in identifying the way of opportunity creation. This perspective applies to the domain of entrepreneurship. On the basis of this primal empirical affirmation persuade to develop a model that ascertain the role of EI in developing the entrepreneurial effectuation in educational settings. This paper tests the impact of emotional intelligence on entrepreneurial effectuation. This topic is important because entrepreneurial effectuation has been rarely studied quantitatively. This study concentrates on students' familiarity and perception about effectuation. We limited the study to the students of University of Balochistan (UOB) because this is the biggest and the oldest public sector University of province. A diversified sample size would be the one of the reason for choosing this university. Balochistan is an underdeveloped province of Pakistan. Consequently, some steps must be taken for encouragement of new entrepreneurs for the development of province. The objective of this study was the measurement and assessment of the role of emotional intelligence in the development of entrepreneurial effectuation. For the reason that emotions reflect relationships between a person and a friend, a family, the situation, a society, or more internally, between a person and a reflection or memory (Mayer & Geher, 1996). This embrace the assumption to investigate the influencing factors of EI for solving problem of entrepreneurial effectuation.

Emotional Intelligence (EI)

Entrepreneurship is considered as an identifying, engendering and stimulation of an activity which must be backed by the creativity and passion. This is the most investigated area for the academicians since last three decades. Thus, it is a big need in this rigorous environment to encourage the role of EI in recognition of entrepreneurship concepts for new start-ups (Vesper & Gartner, 1997). Most of the research has been done on entrepreneur's personalities and their cognitive abilities, but not very significant results (Scheier, Carver, & Bridges, 2001; Vesper & Gartner, 1997). A very promising and emerging trend that has been arising to realize the role of emotions, feelings and attitudes for the new ventures. These emotions also help individuals to recognize the opportunity (Hmieleski & Baron, 2008).

Moreover, understanding of own and others emotions, managing and regulating emotions encourage the new entrants to be able to work with others effectively and passionately (Wong & Law, 2002). These intense emotions about the new ventures displayed the most concentrated level of chances of success than those who are unaware of those emotions (Boren, 2010). An emotional intelligent person exhibits more stable condition when dealing with stress (Scheier, Carver, & Bridges, 2001). It is a big need for entrepreneurs to channelize their emotions into the right directions.

Thus, it is needed for the students to intelligently recognize the opportunities for the understanding of market trends and utmost for the selection of subjects which can boost their understandings to encourage entrepreneurship and to provide a better infrastructure for business start-ups (Vesper & Gartner, 1997).

Effectuation

For understanding the perspective of entrepreneurial effectuation this study is paying attention on different attributes of the effectuation. During the past few years Effectuation has been an important element of the entrepreneurship research (Read, Song, & Smit, 2009). However, it has been concluded from the review of literature that the research on effectuation has not grown rapidly (Berends, Jelinek, Reymen, & Stultiens, 2014; Sarasvathy, 2001). In the domain of entrepreneurship the research on entrepreneurial effectuation was considered as the significant element (Andersson, 2011; Sarasvathy, Simon, & Lave, 1998). (Sarasvathy, 2001) argued that effectuation is considered as more successful when the future is volatile. Effectuation take a set of means as given and focus on selecting between possible effects that can be created with that set of means" (Sarasvathy, 2001).

Different researchers classify attributes of effectuation, first attribute is based focusing on *creation* of the future in uncertain circumstances (Berends, Jelinek, Reymen, & Stultiens, 2014). Second attribute *embrace contingent* indicates the prediction of new startups, while considering the new openings. Third attribute is grounded on the criterion of *affordable loss*. Fourth attribute *mean based* pursues the choices of recognizing the new startups based on available means. Sarasvathy & Kotha (2003) argued that the effectuation is a powerful antecedent that is based upon four attributes creation, embrace contingencies, affordable loss, means based on the available resources.

EI and Effectuation

Emotional intelligence and its effect on effectuation has been the subject matter of some studies (Boyd & Vozikis, 1994; Krueger & Dickson, 1994 and Krueger, 2000). Humphrey (2013,) explained the domain of entrepreneurship "*people who are keenly aware of how EI and entrepreneurial intentions others think and feel would have an advantage in picking new product ideas that people both want and are willing to buy. At*

the highest levels of emotional intelligence, entrepreneurs may know what consumers want before consumers do.” (p. 290).

Evaluating the effect of individual characteristics developing the entrepreneurial effectuation, EI being associated to interaction of individual's emotions, which has been in progress to investigate in past decades, was raised. The hypothesis may be assumed, that EI is vital concept of entrepreneurial growth (Dehkordi, Sasani, Fathi, & Khanmohammadi, 2012). Empirical research, evaluating relation of EI with entrepreneurial effectuation (Sarasvathy, 2001) only had been in progress. (Zampetakis, Kafetsios, Bouranta, Dewett, & Moustakis, 2009) developed a substantial contribution in construction of hypothetical model, linking EI and entrepreneurial effectuation, in addition to entrepreneurial intentions. Regardless of a rising interest in growth of entrepreneurship among students of universities, the effectiveness of EI in development of entrepreneurial intentions is investigated slightly. Zampetakis *et al.*, (2009) investigated the entrepreneurial intentions as the consequence of EI. The intelligence directs the behavior of a person while recognizing the opportunity of student's career, associated with developing a new venture (Krueger *et al.*, 2000). Constructs of EI are examined by own, other's, use and managing emotions defining relations towards effectuation. Components of EI have a linkage to thinking, process towards business creation (Zampetakis *et al.*, 2009). Students, having high EI express more affirmative attitudes for new establishment.

Objectives

1. To investigate the relationship of own emotions with entrepreneurial effectuation
2. To examine the effect of Other's emotions on entrepreneurial effectuation.
3. To determine the effect of using emotions on entrepreneurial effectuation.
4. To explore the relationship of managing emotions with entrepreneurial effectuation.

Hypotheses

1. Own emotions impact entrepreneurial effectuation in a positive way.
2. Other's emotions impact entrepreneurial effectuation in a positive way.
3. Using emotions impact entrepreneurial effectuation in a positive way.
4. Managing emotions significantly relate with entrepreneurial effectuation in a positive way.

II. CONCEPTUAL FRAMEWORK

The model for this study is portrayed in (Figure 1). This model is based upon the previous studies of Saras Sarasvathy's (2001), and EI model of Mayer & Salovey (1997). and renewed for use in the context of entrepreneurial effectuation. This model describes the relationship between the four dimensions of EI, and effectuation. Emotional intelligence (EI) is a multidimensional construct which analyses the four dimensions; namely own emotions, others emotions, using emotions and managing emotions. The research model displays the impact of EI in the development of entrepreneurial effectuation among university students.

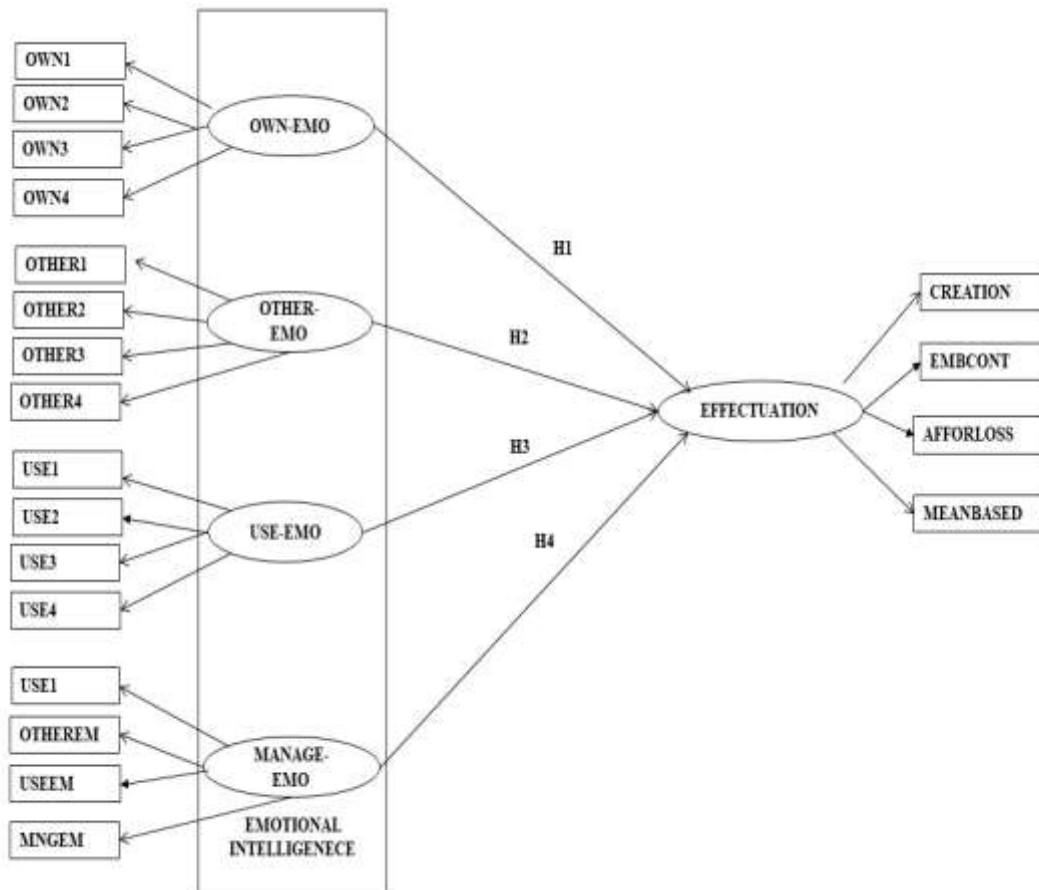


Figure 1: Conceptual framework

III. METHODOLOGY

Sample

Convenience sampling method was adopted with the purpose of adequate responses. Data were collected by randomly distributed 238 questionnaires among bachelor and master's students of University of Balochistan. After eliminating 34 invalid responses a total of 204 responses were left for further analysis. Overall response rate was (86%). A total of 204 respondents comprising of 106 males (52%) and 98 female (48%) with age range of 25-35- years ($M = 29.41$, $SD = 2.86$). One group of participants was comprised of ($n= 127$) Master's Students (62%), and second group ($n= 77$) Bachelor's students (38%).

Measures

Wong and Law Emotional Intelligence scale (WLEIS). EI may provide a framework for organizing personality; it may also suggest an outline for personality researchers who study emotions (Salovey & Mayer, 1990). Four constructs (own, others', using and managing) of emotional intelligence were included in this study.

The observed construct EI was computed from four constructs. Wong and law emotional intelligence scale (WLEIS) was used for measuring EI (Wong & Law, 2002). This scale was comprised of 16 Items. This construct measure four attributes of EI: Own-Emotion, Emotions of others, using emotions, and managing emotions. The example of item is "I really understand what I feel (e.g., sadness, joy, or anger)".

Own Emotions. First construct of EI comprised of four items, also comprises of the capability to recognize one's own emotions (Salovey & Grewal, 2005). Coefficients alpha for the own 0.72.

Other's Emotions. Second construct of EI based on evaluations of other's emotions with four items. Coefficients alpha for other's emotions 0.84.

Using Emotions. Third construct along with four items of emotional intelligence, using emotions, is the ability to harness emotions to facilitate a variety of cognitive behaviors, such as thinking and problem solving (Salovey & Grewal, 2005). Coefficients alpha for using emotions was 0.92.

Managing Emotions. The fourth construct of emotional intelligence, managing emotions, comprised of four items consists of the ability to regulate emotions in both ourselves and in others (Salovey & Grewal, 2005). Coefficients alpha for managing emotions was 0.90.

Effectuation scale. The construct effectuation comprised of 15 item scale was measured through the scale developed by (Chandler, DeTienne, McKelvie, & Mumford, 2011). The theory of effectuation could meet the objective of entrepreneurship education as a process of occurrence and be used as a learning approach (Mäkimurto-Koivumaa & Puhakka, 2013). Effectuation directly draws the authentic methods and conclusion proceeded by entrepreneurs (Sarasvathy & Kotha, 2001). Example of item is “I start my new venture without defining a clear target” and coefficient alpha for the construct was .76.

Procedure

For this study both offline and online survey was conducted for getting the response from participants. Survey was distributed between March-12-2017 to May-10-2017. Survey using questionnaire has been used to collect demographic information and answers of questions about the variables included in this study.

For the survey closed ended questionnaire was used to collect the primary data which was comprised of two sections. The first section included demographic information. The second section was designed to investigate the role of emotional intelligence on development of entrepreneurial effectuation. All items were measured from using five point Likert scale with the anchors being 1 for “strongly disagree” to 5 for “strongly agree”. However, all questions of the survey were structured in order to increase the participation.

IV. RESULTS

For the purpose of analysis of data, SPSS 22.0 was used. Missing data analysis, outliers, linearity, and normality was checked in order to meet the basic assumptions of multivariate (Hair Jr, 2006). The values of skewness and kurtosis depicted the confirmation of normality (Kline, 2011). The data set were checked for the possibility of outliers through Mahalanobis distance. All the values falls within the range (0-2) which indicated that the outlier will not cause effect to results of this study (Wang, Xiao, Yu, & Yang, 2009). CFA analysis was conducted for measuring the reliability and validity of construct.

Main purpose of this study was to test the role of emotional intelligence in developing effectuation of business students. We analyzed a hypothesized framework with four attributes of EI (Figure.1). Loading of all items were significant. Fit indices showed acceptable data model fit.

Table 1

Fit indices for CFA of role of Emotional Intelligence in developing Effectuation

χ^2	df	χ^2/df	sig	CFI	GFI	NFI	RMSEA
237.10	160	1.48	.00	.96	.89	.95	.04(.03,.06)

Table 1 Fit indices showed acceptable data model fit.

Measurement Model

The CFA model fit was measured using AMOS version 23. All the fit indices showed the acceptable data model fit (Table 1) with the values $\chi^2=237.10$ $df=160$, $\chi^2/df=1.48$, $GFI = .89$, $NFI=.95$, $CFI = .96$, $RMSEA = .04$. Factor loadings of measurement items (Figure 2) exhibits significant values of more than 0.50. This reveals that internal reliability is up to the mark.

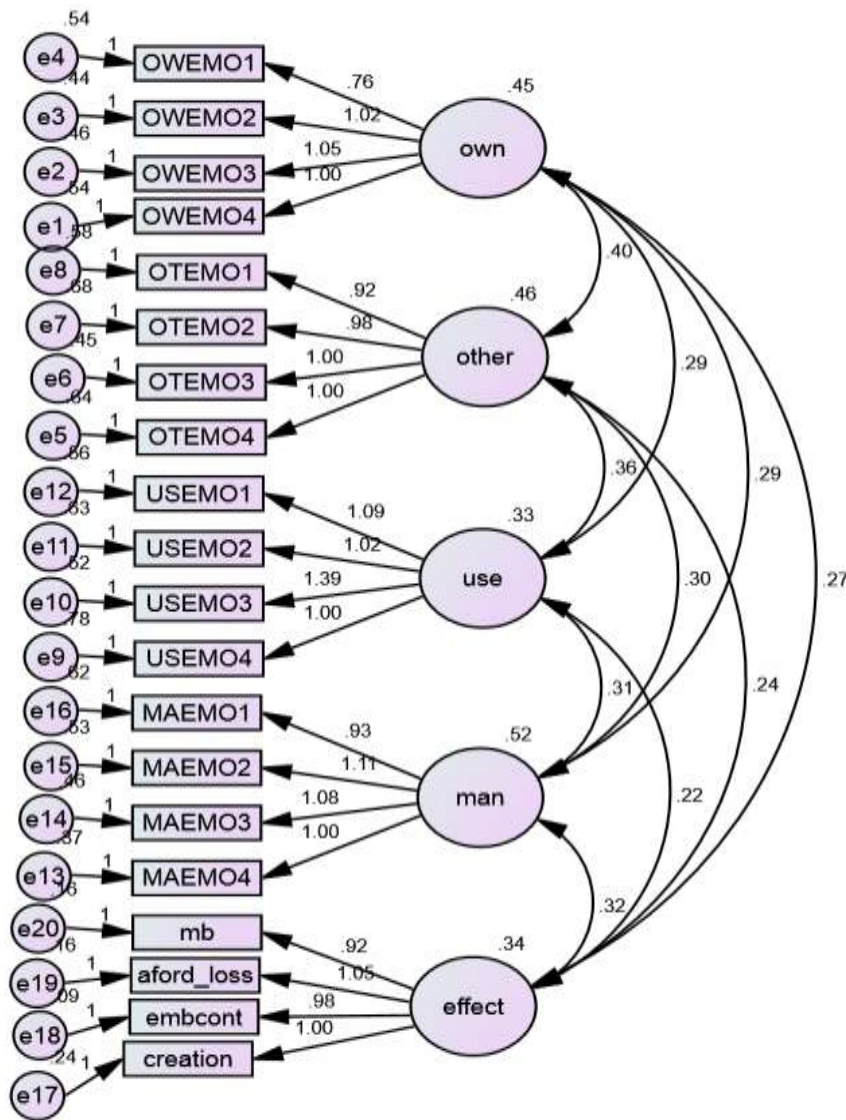


Figure: 2. Confirmatory Factor Analysis Model

own=owns emotions; Other=Other's emotions; use=using emotions; man=managing emotions; effect=effectuation.

Structural Model

Hypothesized model has been assessed with several acceptable model fit indices (Figure 3), shown in (Figure 3) fitted the data well $\chi^2 = 301.95$ df=176, χ^2 /df=1.71, GFI = .96, NFI=.95, CFI = .92, RMSEA = .05. Thus, our hypothesized model was deemed to have good fit to the data.

The findings of our tested model (Figure 3) demonstrated that EI helps in prediction of entrepreneurial effectuation for the purpose of testing our hypothesis we have investigated the parameter estimates (Figure 3). First hypothesis was accepted by the significant estimates of parameter between the path of own emotions and effectuation ($\beta = .62$, $p < .001$). Second hypothesis indicated the significant estimates of parameter between the path of other's emotions and entrepreneurial effectuation, was supported ($\beta = 0.58$, $p < .001$). Next hypothesis suggested the phenomenon of use of emotions in identifying the entrepreneurial effectuation with significant parameter estimates ($\beta = .56$, $p < .001$) exhibits acceptance of

third Hypothesis. The path from the managing emotions to entrepreneurial effectuation was established the significant relationship ($\beta=.71, p<.001$).

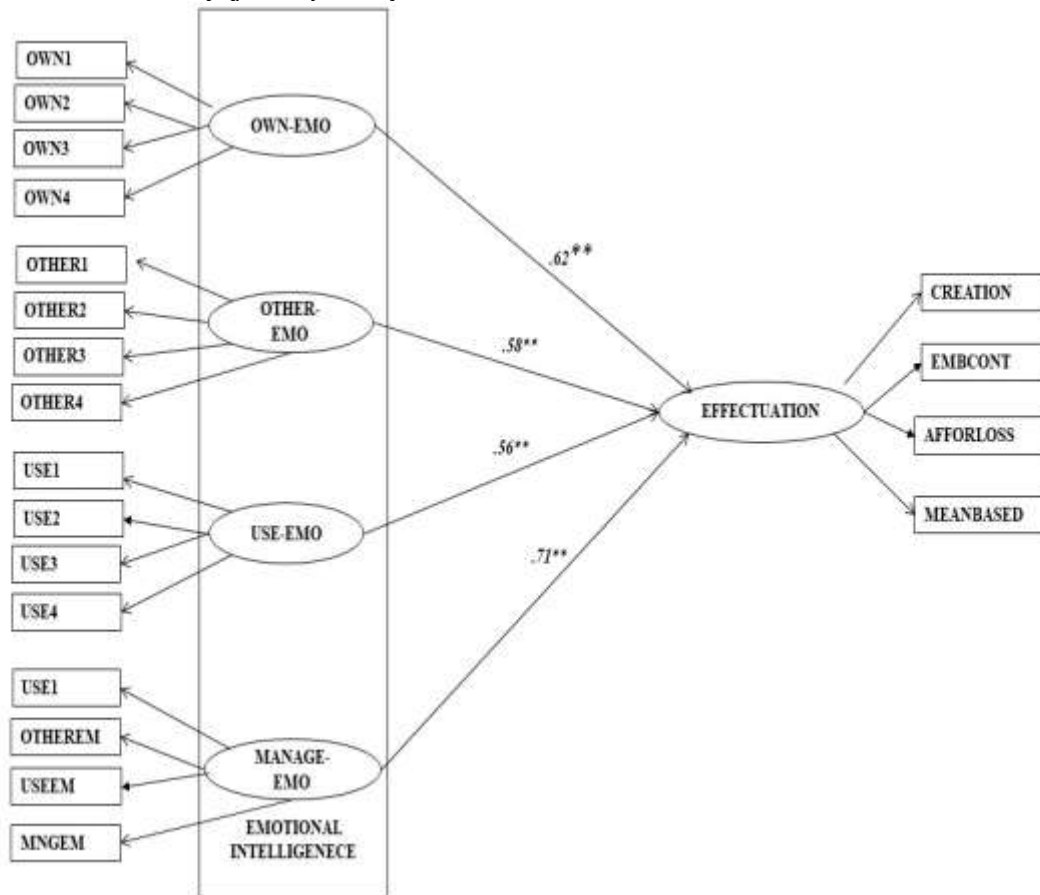


Figure:3. Structural Model

V. DISCUSSION

Based on the results, emotional intelligence has significant effect on effectuation among students at higher education sector. This indicates that emotional intelligence is influential in forming the mindset of students about the entrepreneurial effectuation. Emotional intelligence guides the students, to identify the intelligent ways of recognizing the new venture startups (Kearney, Hisrich, & Roche, 2008).

The present research examined the relationships between emotional intelligence (own emotions, other's emotions, using emotions and managing emotions) and effectuation. Further, emotional intelligence been recognized as an antecedent of effectuation (Krueger, Reilly, & Carsrud, 2000).

First hypothesis of this study focused the relationship between own emotions and entrepreneurial effectuation which was in line with the study of Hmieleski & Baron (2008) which proved the handling emotions transforms to value creation activities. Similarly few scholars identified role of emotions in guiding an individual to explore different avenues of opportunity (Cohen & Pressman, 2006). This argument has proposed that EI directs an individual to find out the new opportunities for startups (Hmieleski & Baron, 2008), entrepreneurial ideas, and identification of new openings (Wu & Wu, 2008). Although present study focused on developing the entrepreneurial effectuation among youth of Balochistan which develop logical thinking process, contrast to the study of Zampetakis, Kafetsios, Bouranta, Dewett, & Moustakis (2009) where they proposed the lack of expertise limit thinking process among MBA students as compare to expert entrepreneurs. Hence novice entrepreneurs are hesitant towards new ventures. The second hypothesis was focusing the relationship between other's emotion and effectuation. It was accepted because a significant relationship was found between the construct.

Humphrey (2013) determined that individuals having high level of capability in perceiving other's emotions are more adept in finding the new opportunities for ventures.

Third hypothesis concerns the use of emotion for effectuation attitude. The hypotheses was accepted because the individuals who used emotions in a better way tends to have a preference for new startups.

Likewise, fourth hypothesis suggested that the individuals who manage emotions accordingly seemed to have a preference for managing creation of future. Individual with high level of capability to manage emotions effectively handle challenges of new start up (Humphrey, 2013). Therefore, the construct of effectuation was influenced by emotional intelligence. While assessing how emotional intelligence influenced entrepreneurial effectuation, through this study it was discovered that intelligence of emotions related to development of opportunity creation, affordable loss, embrace contingencies and mean based.

In sum, effectuation is a multidimensional construct (Chandler et al, 2011).

Effectuation is the sum of opportunity creation, affordable loss, embrace contingencies and mean based constructs. As revealed in the results, all constructs of emotional intelligence and effectuation had positive correlations with each other. This makes it easy to make understandings about effectuation.

VI. LIMITATIONS AND RECOMMENDATIONS

A number of limitations of current study must be overcome in future research for example, generalizability of results is limited caused by cross-sectional data in concurrence with purposive and convenient sampling approach. Conceivably other sampling approaches should be considered in future research.

Another limitation was inclusion of one individual characteristic emotional intelligence. Therefore, researchers are requested to explore the other factors of individual characteristics effecting entrepreneurial effectuation in future attempts.

Present study composed of sample from University of Balochistan that stands as a pioneer in the Public Sector University of the Province. It is further recommended that comparison of the samples from other private and public sectors universities will depict a real picture. Hence, it is suggested to investigate more factors of individual's differences other than emotional intelligence. On the other hand, it is also recommended to explore that what degree effectuation fits appropriately for new ventures.

VII. THEORETICAL AND PRACTICAL IMPLICATIONS

One of the main contributions of this study is to develop the attributes and skills among students through which they can identify the opportunity to establish their own business rather than seeking jobs. Present study contributed an overall conceptual understanding by combining perspectives from the emotional intelligence and entrepreneurial effectuation. From the individual's standpoint the aspects of EI were found to inspire juvenile to find the opportunities for new venture startups. More precisely, our findings implied that own emotions, other's emotions, Using emotions, and managing emotions are the main elements persuading participants to new venture creation

As for practical implications, it is evident that students will develop the skills to attain high level of job creation. Whereas, for the development of this underprivileged area of Balochistan need to strengthen the business sector. Particularly in the contexts where student involvement in entrepreneurship is the dominant driver for boosting the economy of Balochistan. Moreover, it is appreciated to develop the collaborations of our students with developed business sectors in order to understand the notions of emotional intelligence in recognition of entrepreneurial understanding. Thus, it is recommended that university allow for, support and provide the platform for new venture creation through effectuation. Moreover, as emotional intelligence impacts effectuation in a positive way, the policy makers shall develop policies to promote effectual entrepreneurship across the country and become a hope for the Pakistani youth.

VIII. CONCLUSION

It is concluded that emotional intelligence of students in Balochistan is partially noticeable. Thus, developing entrepreneurial effectuation of youth an emotional intelligence play a significant role. The study investigated the relationship of emotional intelligence (own, others, using, managing) with effectuation. The relationship between EI and effectuation were positively significant.

Emotional intelligence appeared as an essential construct in effectuation development phenomenon. It is an assortment of individual's recognizing own emotions, that influence students' ability to succeed in recognizing the opportunities for starting a new venture. To recognize influence of other's emotions to an individual's career in usage of available resources for startups. Hence, the competency to use and manage emotions is an appropriate way of identification of opportunity and new venture creation within the available means. In this study it was revealed, that elements of emotional intelligence are significant in emerging entrepreneurial effectuation. It is purposeful to apply these findings of a study in formulating academic courses and post-diploma programs of emotional intelligence and entrepreneurship development.

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