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Decision Making of Entrepreneurs in Small and Medium-Sized Enterprises (SMEs)

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Abstract
It is obvious that making decisions is the major element of entrepreneurships activities and its inseparable component, and it shows itself in entrepreneur behavior. This research focused on personal factors analysis and the characteristics of an affective decision on entrepreneurs decisions of small and medium-sized enterprises (SMEs). In collecting data in order to investigate the history of the research and the review of the literature, library sources are used, and the choices are assessed with distributing questioner and applying field method. For precise recognition of each choice the data were analyzed applying SPSS22 and AMOS programs. The results show that among personal factors only the information has a significant effect on entrepreneurs decisions.

Keywords: Decision Making, Entrepreneurs, Small and Medium-Sized Enterprises (SMEs).

Introduction
It is obvious that decisions is the major element of entrepreneurships activities and its inseparable component, and it shows itself in entrepreneur behavior. Generally decision making is the main factor in all of the entrepreneurship activities, goals, direction, performance and entrepreneurship activities (ARDAKANI, 2013). Besides it is the decision’s innovation which determines the level of success and priority and positive influence on firm performance (Danai et al., 2018).

Decision making is a process through which a certain solution is decided (Eston, 1983). Decision making is the main part of a occupation, which is very difficult and sensitive and this arises from complicated nature of decision making (Sidney et al., 2012). Generally, decision is a position, idea and judgment after investigation (Miller, 2009). It is a cognitive phenomenon and results from a complicated process of consultation, which include an assessment of potential and uncertainty results (Mooler et al., 2009).

The decisions which are made by entrepreneurs in occupation is the heart and substance of entrepreneurship (Dekart et al. 2010). Gibkas (2003) explained entrepreneurship decisions as a free decision or planned reactions in the area of the objects which affect the survival and
nature of the organization. Corso et al. (2010) made a difference between entrepreneurs behavioral approach and others.

SMEs are regarded as one of the most leading general policies in many of the world’s countries (Alamolhodaei and Fotouhi Ardakani, 2015). Hiks et al. (2010) and Hoy and Tater (2010) stated that entrepreneurs by working in dynamic and complicated environments ignore rational principals and resort to creative and innovative decisions. Developing countries discovered the entrepreneurs incumbency in industrial success, so identifying new methods and recognizing affective factors on decision making, decision making techniques and cooperating with other people is of great importance. Benefiting from these methods and tools individual’s ability in making decision will be more affective and profitable. The purpose of this research is to investigate the affective factors on making decision. Then methodology and data analysis and after that conclusion and suggestion will be introduced.

Theoretical Framework and Literature Review

Entrepreneurs are a key factor in economical development of the countries (Gibkas et al., 2010; Simpson et al., 2010) and it is an important element in countries success (Antonsic, 2008). And it is the source of great changes in industrial, producing and servicing (Lord Kipands, 2002). A lot of researchers introduce entrepreneurship as a tool through which market depressions consisting environmental and social destructions can be reformed (Hell et al., 2010).

Other researchers in entrepreneurship found various combinations of personal, structural and environmental factors which affect the reason and posture of entrepreneurship phenomenon (Ikso et al., 2007). In this study, the effect of personal factors (including information, creative thinking and risk taking) on entrepreneurs decision making was investigated.

Personal Factors

Usually, in defined literature of decision making the activities which take place in decision making process are explained. But the way identifying the problem or the opportunity to make decision and the more important the way of inventing the choices is surrounded by personal factors (Ikaf, 2005). The researches have indicated that those who investigate the possible choices for making decision logically and precisely, in risk taking occasions perform avoidably. In fact they are influenced by these occasions in decision making in risk, observes and excitements (Behchera et al., 1994). Entrepreneurs physiologic traits including risk taking, innovation, positive mentality and creativity have positive effect on occupation (Markatio et al., 2008, Barn and Taung, 2011). The researches showed that coworkers are the main factors in personal decisions (Gookri, 2005; Slovic, 1987).

Several empirical studies worked with some similar factors of this model, Heeth and Teeler (1991) supported that the difference between decisions criterion, business traits and decision maker’s characteristics like; Demographic, stylistics and personalization influence decision making.

Creative Thinking

Researchers majored in behavioral sciences applied the term creative thinking for explaining the strategies existing in searching and processing information (Dicart and Vermelion 2010). From Dean and Shaferman (1993), Fisk and Tilore (1991), Corseo et al. (2010) point of view, creative thinking, judgmental rules, cognitive mechanism, cognitive crosscuts,
mental ideas and abstract judgments which people use in order to make entrepreneurship decisions. The findings resulted from cognitive researches in entrepreneurship shows that entrepreneurs are more to do innovative decisions than the managers of big companies (Chowa 2011). In Gaglyo’s view (1997) creative thinking is in fact mental simulations or un normal reflections or in Corseo’s explanation (2010), they are pre stimulating ideas which may have been arisen from negative situations. Creative thinking help the entrepreneurs to make decision better in complicated and uncertain environments (Simon et al., 2000, Grier and Stiphen, 2001).

Albar and Jeter (2009), Canman and Shien (2002) believe that innovation and creativity influence the entrepreneurs comprehension and explanation of information. Smith Kida (1991) in this respect, indicated that entrepreneurs often unconsciously and half consciously simplify difficult problems and answer to them. In Fisk and Tilore (1991) and Baron’s (2004) view, entrepreneurs often, through the nature of their occupation face with information surplus or an unknown and new condition along with insecurity and great danger and they cant make decision using mental framework or stand in emotional condition, powerful sensation or time pressure. (Hoy and Tater, 2010)

An important point which the researchers emphasized on, was applying creative thinking in entrepreneurs decisions. Smith and Kida (1991) introduce entrepreneurship cognition as a useful factor for broad usage of creative and innovative reflection and personal belief which affect entrepreneurs decisions.

In this respect Gostavson (2008) believes that entrepreneurs creative thinking are cognitive processes which are completely different from norms based on logical processes. Bosnits (1999) showed that, there is a direct relation between using creative thinking and mental discoveries in decision making process and entrepreneurs.

Information

Making decision is a broad area of research for assessment and it is an activity based on information (Hanson and Fregosen 2011). Information play an important role in making decision (Hanson, 2008). Information circulation like blood circulation has a vital role in the survival and the health of a production unit or an occupation (Stiner, 1969). Because information is the foundation of making decision, a part of organizational structure which controls information circulation is paid more attention. the decision which is taken based on 90 percent information and 10 percent intuitional evidence is called a good decision (Winner, 1948). Lonrid (2003) concluded that people apply a broad area of their information sources including internal and external information in their decisions.

Theoretical Framework and Literature Review

Ahmadi (1996), in his research named “investigating the effect of environmental factors on decreasing decisions quality of education ministry managers decisions in Tehran” found that environmental factors of inside and outside of the organization can be an obstacle to a favorite decision. Argon (1998) in his research “ The study of organizational culture and its effect on the method of making decision of Radio and Television organization managers” concluded that there isn’t any relation between organizational culture and managers decisions and the reason is that the managers method of making decision is organizational.

Khademi Grashi (2007) investigated and identified “The affective factors on Tehran stockholders bourse stocks based on structural equation model”. First data was collected by
questioner and then the related factors were identified using operative analyzing method. The results showed that economic factors doesn’t influence people’s decisions.

Albana and Chield (2007) in research named “The effect environmental and organizational factors on logical strategies of employees decisions in Egypt” investigated environmental and organizational factors using a questioner and in two steps and they concluded the following results:

1) Environmental factors have less effect on making decision than organizational traits and decision importance.
2) Organizational and environmental factors and the characteristics of decisions have relationship with managers decision.
3) Organization size, decision motivation and importance and performance have positive relationship with decision making process.
4) Insecurity has a reverse effect on decision making process.

Ibn et al., (2011) in a research with the subject of “How much is the entrepreneurship traits effects on decision making” in 308 females entrepreneur in Turkey found that:

1) Females entrepreneur risk taking has a negative effect on their making decisions.
2) Female entrepreneurs with high succession motivation, resort less on decision making process.

Hypothesis Development and Conceptual Model

The main purpose of this study is to investigate and identify the affective factors on entrepreneurs decision making of SMEs on Zahedan province industrial park. In this research, personal factors like (risk taking, information and creative thinking) as independent variances and entrepreneurs decision making as dependant variance were studied.

Regarding the research the following hypothesis are indicated:

1- Risk taking has an effect on entrepreneurs decision making of SMEs.
2- Information has an effect on entrepreneurs decision making of SMEs.
3- Creative thinking has an effect on entrepreneurs decision making of SMEs.

From Cornel’s point of view (2005), conceptual model is a beginning point and a framework for doing researches and studies, it is so that the research variances and the relationship between them is determined. The beginning model of this research is provided according to the data collected on scientific views and practical researches inside and outside of the country like the researchers of Albana and chield (2007), Pelard et al. (2008), Chals (2011), Ibn et al. (2011), Spensor et al. (2012). In the next step regarding the studied area and special condition an appropriate and local model is provided.
Methodology

This research is practical from its purpose point of view and descriptive survey from its nature point of view. For assessing the questioner’s reliability, first standard questioners were used and after commensuration, it will be submitted to some experts, sages and managers, after they gave their comments reforming measures were done in questioners regarding the specialists and experts ultimate polling. The reliability or the ability to rely on this research is presented in table 1.

First this research is investigated and reviewed concisely using library sources and field studies. Then a questioner including two parts demographic (age, education, job experience) and main body as an assessment tool was provided. The questioner’s main body which assess the main variances of the study is the mixture of risk taking, information and creative thinking questioners which totally include 18 close-ended questions and Likert 5 calibration spectrum.

Statistical population of this research are Zahedan province entrepreneurs SMEs. The statistic sample includes 65 entrepreneurs in industrial park of this city. The calculated Cronbach alpha coefficient is (Alpha=.909). For analyzing the demographic condition of the researcher’s statistical population, four questions are posited in the questioner, in order to give a more general and precise cognition from the statistical population which are working entrepreneurs of small and medium occupation of this city.

In the first part demographic information is relevant to the age of entrepreneurs. According to the obtained results, it can be concluded that the age of working entrepreneurs in these companies (55.6%) ranges from 25-31 years old which contains 55.6% of the total sample. Entrepreneurs’ education shows that, most of the working entrepreneurs in this industry are educated in junior college diploma which are 33.3% of the total sample. The least frequency is related to diploma and less than it. In third part of demographic information
working experience was assessed. The obtained results of descriptive statistics shows that most of entrepreneurs (33.3%) have less than 5 years working experience. The least experienced were upper than 25 years old. Assessing the information sources which entrepreneurs use when making decision, we found that they use more personal experiences, consulting and discussing with others rather than internet and other mass media in making decisions. The government can help them in making decisions with offering counseling and research centers.

In the table below, each variance alternatives, supporting operative factor and its significance are presented.

Table 1- The result of supporting operative analysis and significance for each personal factor

| Statistic        | Number | Personal factors alternatives                                      | Factor loading | significance |
|------------------|--------|-------------------------------------------------------------------|----------------|--------------|
| Risk taking      | 11     | Risk taking                                                       | 0.648          | ***          |
|                  | 12     | Quick decision making                                             | 0.704          | ***          |
|                  | 13     | Precise decision                                                  | 0.777          | ***          |
|                  | 14     | Selecting different solutions before making decision about an important issue | 0.415          | -            |
| Information      | 15     | Paying attention to fundamental information                       | 0.671          | ***          |
|                  | 16     | Benefiting from past experiences                                   | 0.640          | ***          |
|                  | 17     | Data collection for making decision                                | 0.668          | ***          |
|                  | 18     | Analyzing data for making decision                                 | 0.666          | ***          |
| Creative thinking| 19     | Enjoying the solution                                              | 0.460          | -            |
|                  | 110    | Investigating the nature of reality and thinking about it          | 0.470          | -            |
|                  | 111    | Belief in more education                                           | 0.746          | ***          |
|                  | 112    | Common questions in educational environment                       | 0.573          | ***          |
|                  | 113    | Belief in the existence of different solutions for answering the questions | 0.586          | ***          |

The number of questioner alternatives are supporting alternative factors which in order to obtain them, each one of the scaling model are separately performed in the software and for each one operative and significant factors were calculated, which shows that how much the question explained the relevant variance. The supporting operative factors, show the explanation level of that variance by the relevant question, which usually should be significant and more than 5%, otherwise this question should be omitted from later experiments of the research, because its reliability is low (Mozahed and Alamolhodaei and Fotouhi, 2015).

Regarding the following tables alternative 4I belonging to risk taking variance and 9I and 10I belonging to creative thinking are omitted from because of low operative factor, but all of the variances of information remain. So these questions are significant and own more than 5% operative factor. So, the questioner’s questions benefit from high reliability. In the below figure the hypothesis test is presented.
Figure 1 - Ultimate model and hypothesis supporting operative factors

For admitting or rejecting these hypothesis, first the total statistic of model suitability are investigated and make sure of their suitability.

Table 2- Statistics and total measures of hypothesis ultimate model suitability

| RMSEA | PCFI | PNFI | TLI | CFI | IFI | GFI | RMR | CMIN/DF | CMIN | Df |
|-------|------|------|-----|-----|-----|-----|-----|--------|------|----|
| 0.036 | 0.761| 0.653| 0.969| 0.975| 0.977| 0.908| 0.065| 1.141   | 81.01 | 71 |

According to the results it can be concluded that, all of the model fitness indexes relating to the main hypothesis of the research are acceptable. So in the following, operative alternatives significance and the model coefficients will be investigated. The following table shows the minor indexes
Table 3- Minor indexes and hypothesis paths

| Path                             | (Estimate) | (S.E) | (C.R) | (P) |
|----------------------------------|------------|-------|-------|-----|
| Risk taking → decision making    | -.226      | .232  | -1.284| .199|
| Information → decision making    | .691       | .259  | 3.161 | .002|
| Creative thinking → decision making | -.090     | .097  | -.792 | .428|
| Risk taking → 11                 | .642       | -     | -     | -   |
| Risk taking → 12                 | .722       | .184  | 5.322 | *** |
| Risk taking → 13                 | .766       | .232  | 5.469 | *** |
| Information → 15                 | .631       | -     | -     | -   |
| Information → 16                 | .406       | .232  | 3.513 | *** |
| Information → 17                 | .575       | .215  | 4.282 | *** |
| Information → 18                 | .709       | .263  | 4.500 | *** |
| Creative thinking → 111          | .600       | .152  | 4.473 | *** |
| Creative thinking → 112          | .747       | .234  | 4.412 | *** |
| Creative thinking → 113          | .665       | -     | -     | -   |
| Decision making → D4             | .568       | .181  | 5.058 | *** |
| Decision making → D3             | .766       | .194  | 6.201 | *** |
| Decision making → D2             | .833       | .197  | 6.394 | *** |
| Decision making → D1             | .653       | -     | -     | -   |

The results of the above table show that all of the operative alternatives are significantly different from 0, and P which is related to structural coefficient is larger than 0.05 and it is significant. So the minor indexes of fitness are confirmed. According to the results presented in the table, the results of the hypotheses is as it follows:

The first hypothesis: the efficacy coefficient of risk taking variance on entrepreneurs decision making is equal to 0.226. P is larger than 0.05 (0.199) and critical rate (CR) is equal to 1.284 that is smaller than acceptable confine that is 1.96, so it is claimed that the first hypothesis is not confirmed in the research sample. Therefore, the entrepreneurs risk taking doesn’t influence their decisions.

The second hypothesis: the efficacy coefficient of information variance on entrepreneurs decision making is equal to 0.691. P is smaller than 0.05 and critical rate (CR) is equal to 3.161 that stands in acceptable confine, so it is claimed that the second hypothesis is confirmed in the research sample. In other words, the entrepreneurs information has a direct and positive effect on their decisions.

The third hypothesis: the efficacy coefficient of creative thinking variance on entrepreneurs decision making is equal to 0.090. P is larger than 0.05 and critical rate (CR) is equal to 0.792, so it is claimed that the third hypothesis is not confirmed in the research sample. So creative thinking doesn’t influence entrepreneurs decisions.

Conclusion

This research project examined decision making of entrepreneurs among 65 entrepreneurs of SMEs in Zahedan, Iran. In addition, is one of only a few papers to examine decision making among entreprenures in this city. The results of this study indicated that Individual characteristics include risk-taking, information, and critical thinking, which only information variable has had a significant impact on decision making of entrepreneurs.

In this part each one of the hypothesis will be analyzed:
Ikso et al. researches (2007) and Howard (2004) shows that personal factors like taking risk, internal control, self confidence, creative thinking and ... influence the entrepreneurs behavior, activity, choice and decision making. Besides several empirical studies which worked with similar factors of this research model including Heet and Teeler (1991), Albana and child (2007) supported that personal factors influence entrepreneurs decisions.

In studying the effect of risk taking in decision making of entrepreneurs of SMEs it was showed that efficacy coefficient of risk taking variance on entrepreneurs decisions was equal to 0.226 regarding the proportion of P and critical ratio (CR) it can be claimed that the first hypothesis is not confirmed in the study sample. It means that entrepreneurs risk taking doesn’t affect decision making. Investigating the effect of the information level on entrepreneurs decisions of SMEs showed that regarding the analysis and P and CR space this equation is confirmed, in other words, information plays an important role in making decision.

Information circulation like blood circulation has an important role in a productive unit or an occupation life and health maintenance(Winner, 1948). Lonrid (2003) researches shows that entrepreneurs information sources which include internal and external information influence their decisions. In Barron’s view (2004) entrepreneurs information level in an unknown and new condition influence their making decisions which accord with the result of this study. In sum up, if entrpurenurs accesses to right and useful information, they can choose the best decision and better performance in the SMEs.

The affective studies of creative thinking on entrepreneurs decision making of SMEs shows that creative thinking is judgmental rules, cognitive mechanism, cognitive crosscuts, abstract ideas and mental judgments which entrepreneurs apply when making decision, and help them make their decisions better in complicated and insecure environments.

Chowa (2011) findings, which are resulted from cognitive researches in entrepreneurship, show that entrepreneurs apply creative thinking more than company managers in their decisions. Bosnits (1999) indicates that there is a direct relationship between creative thinking and mental discoveries in entrepreneurs decision making process. The results of this study doesn’t correspond with Mobarakı et al. (2002); Corseo et al. (2010); Dikart and Vermelon (2010); Dean and Shaferman (1993); Fisk and Tilore (1991) research which was based on this idea that creative thinking affects entrepreneurs decision making.

The results should be useful for entrepreneurs, government, stockholders, and owners of SMEs and providers of services to SMEs to better understand which factors affect adaptation of decisions. Financial statements provide important information that should be used, both by external evaluators and internally, to help guide decisions. Entrepreneurs, owners and providers of services can use the information to understand which factors affect their use of financial statements. Such an understanding of what factors have this influence may improve the process by which financial statements get incorporated into decisions.

The several limitations of this study also provide avenues for further research. The study could be expanded to investigate the relationship between decision making and SMEs performance across multiple markets and regions of the world during the COVID-19 pandemic. Finally, the data was collected at a single point. A longitudinal study could provide further evidence the relationship between environmental features and multiple SMEs characteristics over the business cycle.
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