

ENTREPRENEURSHIP AND COGNITIVE BIASES: A REVIEW ON OVER CONFIDENCE AND ILLUSION OF CONTROL BIAS

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ABSTRACT

Studies on personality traits have shown certain characteristics of entrepreneurs as essential for being successful. Entrepreneurs like all individuals are also influenced by certain cognitive biases which have serious repercussions on entrepreneurial decision making. This paper is an attempt to review two such important cognitive biases, i.e. Overconfidence bias and Illusion of control bias both having an impact on entrepreneurial decisions. Studies show that entrepreneurs think differently and so is their risk perception. Overconfident individuals think that a venture is less risky and hence they enter into risky businesses unknowingly. The illusion of control bias decreases one's perception of the level of risk associated with a new venture formation. It becomes essential that entrepreneurs are aware of their biases so that they can evaluate business prospects more realistically.

KEYWORDS: *Impact on Entrepreneurial Decisions, Risk Perception, Running a Business is Complex*

INTRODUCTION

The mystery around the success in business and becoming an entrepreneur is intriguing. Everyone wants to make huge money, be successful and having one's own business seems only the way forward. Running a business is complex and involves a considerable amount of risk. Not all people starting a business are successful. Repeated surveys show that only 3 - 5percent of entrepreneurs are successful and over half of the ventures fail within 5 years (Cooper, Woo, and Dunkelberg 1988). It is necessary that entrepreneurs need to be risk-taking, innovative, alertness to the environment and also be a leader. Decades of studies have revealed certain personality traits to be associated with successful entrepreneurs. Most studies agree on the risk-taking ability, need for achievement, locus of control, alertness to environment, etc. for entrepreneurial success. But do entrepreneurs think differently? How does the cognitive thinking process influence a person's desire to start a new venture, is their risk perception different from non-entrepreneurs? Are entrepreneurs influenced by certain cognitive biases? This paper is an attempt to review earlier studies and find an answer to the above questions. The first portion of the study discusses the concept of cognitive biases, followed by the overconfidence and illusion of control bias and how they impact entrepreneurial decisions.

Festinger's Cognitive Dissonance Bias

HershShefrin (2007) defines bias as a predisposition towards error. It is a prejudice or a propensity to make decisions while already being influenced by an underlying belief.

Cognitive Dissonance encompasses the responses that arise as people struggle to harmonize cognitions and thereby relieve their mental discomfort. When newly acquired information conflicts with preexisting understandings, people often experience mental discomfort which is a psychological phenomenon called cognitive dissonance by Festinger (1957)[i]. Festinger's theory asserts that individuals are distressed by conflicting cognitive elements, such as a discrepancy between empirical evidence and past choice, and that they alter their beliefs to support past decisions in order to reduce this discomfort. In the context of investment decision making, cognitive dissonance can be considered a psychological cost that investors seek to reduce by adjusting their beliefs about past investment choices.

Anytime someone feels compelled to choose between alternatives, some sense of conflict is sure to follow the decision. This is because the selected alternative often poses downsides, while rejected alternative has redeeming characteristics. These factors challenge the decision maker's confidence in the tradeoff he or she has just negotiated. If facts challenge the course to which a subject is emotionally attached, then those facts pose emotional threats. Most people try to avoid dissonant situations and will even ignore potentially relevant information to avoid psychological conflict. Theorists have identified two main aspects of cognitive dissonance.

Tversky, Daniel Kahneman and his colleagues demonstrated several replicable ways in which human judgments and decision differ from rational choice theory. Biases arise from various processes that are sometimes difficult to distinguish. These include information processing shortcuts (heuristics), mental noise and the mind's limited information processing capacity, emotional and moral motivations. Kahneman has explained heuristics as human differences in judgment and decision making which involve mental short cuts which provide swift estimates about the possibility of uncertain occurrences. These heuristics which are simple for the brain to compute introduce 'severe and systematic errors' (Tversky and Kahneman)

Cognitive bias is seen as a consistent deviation from rational judgment. Cognitive biases and heuristics are mental shortcuts and simplifying strategies used to make judgments and take decisions under uncertain conditions (Bazerman, 1998; Busenitz & Lau, 1996; Simon, Houghton, & Aquino, 2000). Every human being organize, categorize and process information based on their perceived ideas and individual experiences. This is due to the different cognitive schemata and approaches towards information management (Baron and Markman, 1999). So, individuals process information differently and hence their approach to risk-taking and other entrepreneurial decisions are more likely to be influenced by cognitive biases. Studies on entrepreneurial bias show that entrepreneurs may be more prone to some biases and heuristics than non-entrepreneurs (Baron, 1998) due to either disposition

OVERCONFIDENCE BIAS

Overconfidence can be summarized as unwarranted faith in one's intuitive reasoning, judgments and cognitive abilities (Michael Pompian, 2006). People tend to be overconfident about their level of knowledge and their general abilities.

Overconfidence is derived from cognitive psychological experiments in which subjects overestimate both their own predictive abilities and the precision of information they've been given. As such overconfidence bias has several forms like a feeling of better than average, optimism and too narrow confidence limits. De Bondt and Thaler (1995) note that psychologists find overconfidence to be a pervasive human character.

Shefrin (2000) describes overconfidence with an example of driving. A research group was asked regarding their driving ability and between 65 and 80 percent of the respondents rated themselves above average. However in reality, only half of us can be i.e. if the trait is symmetrically distributed. In a study conducted by James Montier (2006), on 300 professional fund managers, 74 percent of them believed that they had delivered above-average performance and the remaining 26 percent believed that their performance was average. Almost 100 percent of the respondents believed that their performance was average or better. Studies show that as people gather more information about a situation, their confidence increases and not their judgment abilities. They equate the quantity of information with quality. This is referred to as certainty overconfidence.

Over Confidence in Entrepreneurs

Studies show that the level of self-confidence is higher in entrepreneurs compared to other (Levander and Racuia2001). This leads to higher self-esteem, which in turn leads to overconfidence. For entrepreneurs to become successful, it becomes necessary that they are aware of themselves which is called as metaknowledge and information (Baron and Markman, 2000). People who are overconfident tend to underestimate their lack of knowledge and overestimate their predictive ability. In a study on 2,994 entrepreneurs (Cooper et.al), on measuring their confidence and their perception of risk, shows (Cooper et al.,). 81% consider their chances of success in business to be at least 70%, and 33% believe their chances of success to reach a probability of 100%. But various studies show that more than 75 percent of new businesses do not exist after five years.

Entrepreneurs also process information differently. Overconfident individuals remember evidence that confirms their belief and does not take into account the evidence that is on the contrary (Russo and Schoemaker, 1992). Such a selective approach results in inadequate information search (Zacharakis and Shepherd 2001). They also consider assumptions as facts. These things make the overconfident individuals think that a venture is less risky and hence they enter into risky businesses unknowingly ((Tversky and Khaneman1973).

Illusion of Control Bias

The illusion of Control bias is a tendency in human beings which leads to believe that they can control or at least influence outcomes, when in fact they cannot. It is the expectancy of a personal success probability inappropriately higher than the objective probability would warrant (Ellen langer). Langer found that choice, task familiarity, competition, and active involvement can all influence confidence and generate such illusions.GerlindeFellner (2004), in her paper 'Illusion of Control as a source of Poor Diversification: An Experimental Approach', investigating factors influencing individual portfolio allocations with particular focus on the role of illusion of control, found that subjects excessively invest in the lottery for which

they can determine the outcome by rolling the die themselves indicating that they are prone to illusion of control. However, the effect vanishes with experience. Davis et al (2000), In order to examine the effects of active vs. passive task participation (a variable hypothesized by Langer to affect the illusion of control), patrons of Reno casinos were observed placing craps bets on their own and another yoked patron's dice rolls. It was hypothesized that subjects would (a) place higher bets and (b) place more "difficult" bets (e. g., where only one specific number, as opposed to any of several numbers, may win) on their own rolls (when they would experience the illusion of control over the outcome) than on other patrons' roles (when they would not experience such an illusion). That is, players were expected to generally adopt riskier betting strategies when throwing the dice.

Entrepreneurs too believe that they can control the outcomes over which they actually have no control over. The illusion of control occurs when individuals overemphasize the extent to which their skill can increase performance in situations where chance plays a large part and skill is not necessarily the deciding factor. Because the individuals believe that they can control largely uncontrollable events, they also think they can accurately predict the outcome of the events (Simon et al. 2000). So, the person with an illusion of control bias believes that she or he can control and predict the outcome of uncertain events precisely (Duhaime and Schwenk 1985; Shaver and Scott, 1991). Studies show that an individual's perceptions, rather than objective reality, explain the decision to start a venture (Krueger 1993; Krueger and Brazeal 1994). Also, studies suggest individuals take risky actions (i.e., actions that have a high possibility of disappointing outcomes) because they perceive less risk than most (Kahneman and Lovallo 1993; MacCrimmon and Wehrung 1990; March and Shapira 1987). Even when individuals evaluate identical situations, some people conclude the situation is very risky, whereas others believe it is not (e.g., Nutt 1986, 1993). Even if they do not have a high-risk propensity, individuals who perceive less risk than others might unknowingly take risky action. Thus an illusion of control bias decreases one's perception of the level of risk associated with a new venture formation. Cognitive biases directly influence risk perception, and risk perception directly influences the decision to start a venture, then cognitive biases indirectly affect the decision through their effect on risk perception

CONCLUSIONS

Successfully running a business is a complex task with multiple factors influencing its success. In an ever-changing global environment, it becomes even more complex. Cognitive biases amongst entrepreneurs influence their business decision making. This paper throws some light on both overconfidence bias and the illusion of control bias which affects the risk perception of entrepreneurs. Studies show that individuals who perceive less risk than others might unknowingly take risky action. People who are overconfident tend to underestimate their lack of knowledge and overestimate their predictive ability. Entrepreneurs also process information differently. Overconfident individuals remember evidence that confirms their belief and does not take into account the evidence that is on the contrary (Russo and Schoemaker, 1992). Such a selective approach results in inadequate information search (Zacharakis and Shepherd 2001). They also consider assumptions as facts. These things make the overconfident individuals think that a venture is less risky and hence they enter into risky businesses unknowingly (Tversky and Kahneman 1973). The illusion of control bias decreases one's perception of the level of risk associated with a new venture formation. It becomes essential that entrepreneurs are aware of their biases, which can help them in proper

information search, question their assumptions and have a realistic view on outcomes.

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