Journal of Economic Psychology 33 (2012) 1059–1069

Contents lists available at SciVerse ScienceDirect

Journal of Economic Psychology

journal homepage: www.elsevier.com/locate/joep

The effect of anger and anxiety traits on investment decisions

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ARTICLE INFO

Article history:
Received 2 January 2012
Received in revised form 9 July 2012
Accepted 10 July 2012
Available online 20 July 2012

JEL classification code:
3120-personality traits & processes

PsycINFO classification code:
D14-personal finance

Keywords:
Anger
Anxiety
Personality traits
Economic decision-making
Personal finance

ABSTRACT

This study investigates the extent to which people make financial decisions on the basis of their dispositional tendency to engage in a specific emotion, such as anger or anxiety. We predicted that trait anger is associated with the decision to invest, whereas trait anxiety motivates individuals to avoid investments. We employed a six question survey, considering real life investment decisions, stock trend predictability and preference toward risk investments, and three hypothetic scenarios to measure the participants' risk attitudes in the area of finance. The results showed that trait anger predicted risky decisions: it was positively associated with the willingness to invest money in different kinds of stocks, preferring medium/long-term investments, and with high predictability assessment in the forecast of stock trends. Contrarily, trait anxiety predicted conservative financial decisions: it was associated with the decision not to invest savings, to hold interest-bearing accounts, and with low predictability of stock trends. In hypothetic scenarios trait anger predicted a medium risk portfolio and the decision to wait before selling both loss and gain investments, while trait anxiety was associated with the preference for a low risk portfolio and with the decision to immediately sell a stock both if it increases or decreases in value. These data are consistent with cognitive models of emotions, highlighting their functional utility and extend the knowledge of the relationship between personality traits and real life investment decision-making.

1. Introduction

To successfully navigate the financial world, an individual must be able to distinguish and respond appropriately to different situations which require more proactive, but potentially costly, strategies or more passive, conservative decisions. Emotions such as anxiety and anger serve these different functions: anger has been defined as an "emotional state that consists of feeling that varies in intensity, from mild irritation or annoyance to fury and rage" (Spielberger & Sydeman, 1994) and it tends to promote approach and proactive behavior in the form of attack (e.g., Lerner & Tiedens, 2006). On the other hand, anxiety has been defined as an emotional response involving unpleasant feelings of tension, apprehensive and worried thoughts and it prompts avoidant and conservative behavior (Raghunathan & Pham, 1999; Wilt, Oehlberg, & Revelle, 2011). Since emotions have developed through evolutionary processes, they are often functional and important in both the assessment of situations and the consequent decisions (e.g., Finucane, Alhakami, Slovic, & Johnson, 2000; Hogarth, Portell, Cuxart, & Kolev, 2011).

Previous research has found that emotional states can alter people's goals, attitudes and perception, (e.g., Forgas, 2000; Zajonc, 2000). It has been widely accepted that decision making can be influenced by emotional states, involving differences in the way individuals appraise events (e.g., Slovic, Finucane, Peters, & MacGregor, 2004). According to cognitive models (Beck, 1999; Eysenck, 1997), emotions are supported and regulated by a variety of cognitive processes: no emotion can

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http://dx.doi.org/10.1016/j.joep.2012.07.001

be without a cognitive appraisal attributing a meaning to situations. Peters, Västfäll, Gärling, and Slovic (2006) suggested that cognitive assessments of the environment, activated by specific emotions, have an important influence on decision making: they act as informational, motivational and processing functions and so they have specific impacts on outcome effects. Previous studies have shown that anger increases the tendency to perceive situations as predictable, comprehensible and under individual control (Ellsworth, Scherer, Davidson, Scherer, & Goldsmith, 2003), and it increases optimism and feelings of invulnerability (Quigley & Tedeschi, 1996). As a consequence, anger is related to the perception of low risk across new situations (e.g., Lowenstein & Lerner, 2003). On the other hand, anxiety is linked to an attentional bias toward threat-related information and to evaluating ambiguous stimuli as negative ones (e.g., Bar-Haim, Lamy, & Glickman, 2005; Gu, Ge, Jiang, & Luo, 2010). Moreover, anxiety is associated with the perception of uncertainty, unpleasantness and low situational control (e.g. Smith & Ellsworth, 1985). In this sense, when an individual feels anxious the perception of risk across a situation increases, because of a disproportional dwelling on loss outcomes.

In the assessment of emotions, it is important to distinguish between the intensity of the experience of the emotional states and the individual differences in the tendency to react with these specific emotions across time and situations, that is personality traits (e.g., Lazarus, 1994). Over the last 15 years there have been an increasing number of studies about the influence that personality traits have on financial perception and decisions (e.g., Gibson, 2006). Traditionally, economic theory implies that investment decisions should be based on expected utility. That is, the best decisions are those that maximize the expected utility of the money obtained. Economists define risk as an objective index that has to be used when deciding on which solution to invest in. They highlight the importance of looking at the risk/return ratio of the selected investment. From this point of view, investment risk is the variance of stock utility (e.g., Rabin & Thaler, 2001). However, several studies showed that people do not assess investment risk objectively (e.g., Parker & Fischhoff, 2005). Research in judgment and decision making has shown that risk perception, that is the intuitive judgment about the occurrence of negative outcomes and the severity of the associated consequences, and risk acceptance, which involves the subjective balancing of benefits with risks and their acceptability, are influenced by many other factors aside from the utility of money, such as personality traits. A variety of studies have attempted to explore types and traits correlated with investment perception and behavior. For example, Carducci and Wong (1998) found that persons with a Type A personality are more willing to take higher levels of risk in all financial matters than Type B individuals. There is also evidence of a desire for "sensation seeking" by some persons in terms of their financial management (Wong & Carducci, 1991). These personality characteristics, in combination with specific socioeconomic background (i.e. being male, older, married, professionally employed with higher incomes, more education, more financial knowledge, and increased economic expectations), predicted risk acceptance, tolerating declines in the investments' prices while waiting for them to increase in value, in everyday money matters (Grable, 2000). Fenton O'Creevy, Nicholson, Soane, and Willman (2004) found that successful professional traders for European investment banks, who have likely high levels of risk acceptance, tend to be emotionally stable and open to new experiences. Extraversion and conscientiousness were both found to be positively related to short-term investment intentions (Mayfield, Perdue, & Wooten, 2008). On the other hand, other authors have concluded, without studying large samples of traders, that personality traits are themselves not important for trading and investment decisions (e.g., Lo & Repin, 2005).

Regarding the anger and anxiety traits, there is evidence suggesting a relationship between trait anger and risky decisions in hypothetic financial, social and health scenarios (e.g., Gambetti & Giusberti, 2009), as well as a relationship between individual differences in trait anxiety, worry, and social anxiety and risk-avoidance in a behavioral risk-taking task (e.g., Maner et al., 2007). Recently, a study found a significant negative correlation between trait anxiety and investment behavior, but only in the case of the immediate resolution of risk (van Winden, Krawczyk, & Hopfensitz, 2011).

In general, although the literature has shown that anger and anxiety traits predict risk perception and risk acceptance, few studies have investigated the relationship between such personality traits and real life investment decisions. Research in this field is in fact primarily experimental and there is a general disagreement about the level of external validity of the results because this kind of studies tested participants in artificial conditions that bear little resemblance to the outside world (e.g., Gigerenzer, 2008). Thus, it is important to further investigate whether anger and anxiety traits play different roles in investment perception and decision in real domains of human life.

1.1. The current study

Some studies suggest that personality traits resemble momentary emotions in important ways and should thus yield similar effects on judgments and decisions (e.g., Gross, Sutton, & Ketelaar, 1998). Since the evaluation of an expected outcome is an important step towards decision making (e.g., Paulus, 2005), individual differences in anger or anxiety predispose respectively to a positive or a negative outcome evaluation (e.g., Fischhoff, Gonzalez, Lerner, & Small, 2005; Gu et al., 2010). This kind of codification is a key to adjust the assessment of preferences among possible options of the subsequent decision making. As cited above, trait anger and trait anxiety appear to predispose, respectively, to risky and to avoidant decisions (e.g., Mitte, 2007). However, the impact of individual differences in anger or anxiety-proneness on real life financial decisions has till now been noticeably understudied, even though they are particularly noteworthy: they may be unconscious and unrelated to the decision at hand, nonetheless they can have the potential to influence the perception of financial products and the consequent decisions in important ways.

The main purpose of the current study was to evaluate the relationship between anger and anxiety traits and financial behavior, considering real life investment decisions. We conducted an experiment in which participants were confronted