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The Influence of Anger and Sunk Cost Bias on Project Status: An Extension to Portfolios of Projects

Summary

Entrepreneurial decisions traditionally embrace four main sequential decisions: to continue, discontinue, or sell the firm (Shepherd, et al., 2014). This research will study the entrepreneur's exit decision in relation to individual projects. It adopts an emotional approach to the entrepreneur's decision to continue or discontinue a project as a more individual view on entrepreneurial failure (Khelil, 2016).

Specifically, the proposed research aims to study the relationship between anger as one specific emotion in relation to retention/termination decisions on projects. It will also highlight the influence of sunk cost bias as one cognitive bias that moderates the anger–retention/termination decision relationship, as well as the influence of portfolio considerations as another moderator whereby a company decides to retain or terminate a single project in light of the existence of a portfolio of projects.

Entrepreneurship and Organizational Psychology Track

Authors:

Professor Trevor Buck (Principal Supervisor)

Dr. Joanna Wincenciak (Second Supervisor)

Heba Balatia (PhD researcher)

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Between negative and positive work-related and personal-related events; emotions, cognition and bias may change companies, close projects or develop a successful business. This research aims to study the relationship between anger as one specific emotion and the retention/termination decisions of projects. It will also highlight the influence of sunk cost bias as one cognitive bias that moderates the anger–retention/termination decision relationship, as well as portfolio considerations as another moderator of the anger – retention/termination decision relationship when a company decides to retain or terminate a single project in light of the existence of a portfolio of projects.

Entrepreneurial decisions comprise four main sequential decisions (Shepherd, et al., 2014, p. 11); 1) opportunity assessment (Shepherd, et al., 2014, p. 13); 2) entrepreneurial entry (Shepherd, et al., 2014, p. 20); 3) exploiting opportunities (Shepherd, et al., 2014, p. 22); and finally the entrepreneurial exit decision which embraces the decision to continue, discontinue, or sell the firm (Shepherd, et al., 2014, p. 27). This research will concentrate on the entrepreneurial exit decision.

Project retention is when the firm's strategies, technologies, and processes supporting a specific project are effective in their current form and will lead to the retention of the project's processes or activities (Joseph, Klingebiel, and Wilson 2016, p.1067). On the other hand, project termination refers to "...the discontinuation of a project before it achieves its complete implementation." (Dilts and Pence 2006, p.380)

Emotions may affect these retention/termination decisions (Vaestfjaell & Slovic, 2013, p. 258). For example, anger is a specific emotion that is considered as the only negative emotion that fosters heuristic processing (intuitive decision-making as opposed to systematic processing or rational decision-making). It is a widely prevalent emotion and the most commonly occurring emotion in work settings, and is assumed to influence decision making (Coget, Haag, and Gibson 2011, p.477).

There are two primary types of anger. The first is state anger that is a temporary emotional state that consists of a range of feelings (i.e. irritation to intense rage), physiological and cognitive reactions, behavioural tendencies, and observable verbal and motor behaviours. Trait anger is a second type, defined as "*a longer-term disposition to perceive situations as anger provoking and to experience more frequent and more intense episodes of state anger.*" (Gibson and Callister 2007, p.68).

Any emotional component, including anger, is involved in the sunk cost effect attached to any decision (Harvey and Victoravich 2009, p.775). Sunk costs, defined as "...any prior investment of money, effort, or time" (Wilson and Corporation 1997, p.280), are assumed to be a major determinant of action persistence and the perceived utilities of persistence and withdrawal that are a function of information processing for decision-making (Two et al. 1991, p.57). "The sunk cost effect" on the other hand is defined as "*a tendency for individuals to become overly committed to escalation situations—to throw good money after bad or to persist beyond an economically rational point*" (Wilson and Corporation 1997, p.280).

Some studies find a negative relationship between the sunk costs and project retention, i.e. a positive relationship with project termination (e.g. Staw and Fox,1977; Garland et al., 1990;McCain,1986), while others report a strong positive correlation between sunk costs and project retention which means a strong negative correlation with project termination(Garland 2017, p.403). Therefore, in this research, sunk cost bias is assumed to moderate the relationship between anger and project retention/termination decisions.

From another perspective, it is important to suggest that decision making needs to consider projects as an integrated system of processes when taking a decision related to a single project in a corporation(Kester et al. 2011, p. 641). Here, the presence of other alternative projects (i.e. portfolio considerations) in an organization may impact on the decision to retain or terminate an existing project, and it may result in moderating the effect of anger and weakening sunk cost bias for the existing project that is more likely to be terminated while retaining the alternative project.

Additionally, the entrepreneurship literature has presented two theories that introduce some psychological, rather than economic, factors that are proposed to influence entrepreneurial continuation and discontinuation in the workplace context. These theories are the discrepancy theory and the threshold theory that are classified under the emotive approach(Khelil 2016, p.75). Discrepancy theory suggests that an individual's satisfaction is partly identified by a gap between actual rewards or performance and the individual's goals or expectations(Cooper and Artz 1995, p.439). The threshold theory however, proposes that survival does not only depend on the firm's economic performance but also on the entrepreneur's performance threshold(Khelil 2016, p.75). Employing these two theories would help us to understand the relationship between anger and the decision to retain or terminate a project.

Research Gap and Research Questions

Gaps in the extant literatures have been identified in relation to three different aspects. Firstly, the effect of negative state emotion on decision making; secondly, the sunk cost effect; thirdly, decision making within a portfolio of projects.

Prior research has focused predominantly on the cognitive aspects of decision making, ignoring the emotional lens. This could weaken the external validity of research in this field, if emotions and their relationship with cognition are not considered, especially because emotion is found to be essentially embodied in decision-making processes(Fai et al. 2006, p.284).

Although literature has provided a useful foundation concerning the role of emotions in the *sunk cost effect*, the literature has not, however, considered positive or negative discrete emotions in regard to how these emotions are influenced by project-related factors and how they impact on project commitment levels (Harvey and Victoravich 2009, p.765).

Besides this sunk cost effect, this research also concentrates on *project portfolio management*, since any decision concerning terminating or retaining a single project requires an integrated system of processes concerning the whole portfolio of projects(Kester et al. 2011, p. 641).

Most entrepreneurship literature addresses the influence of affect throughout the opportunity identification and exploitation stages but hardly during project termination and retention. In addition, research on entrepreneurial termination and retention has focused mainly on the financial consequences of entrepreneurial termination and retention, ignoring or downplaying the emotional consequences (psychological factors) of business termination or retention (Shepherd, Wiklund, and Haynie 2009, p.135).

The importance of this research is to advance research and understanding of the role of some psychological factors and cognitive bias in project retention and termination decisions. This could be though introducing a new theoretical lens from the intersection of psychology and management. Additionally, this research will try to bridge the above-mentioned gaps.

In relation to the gaps identified above. This research will propose three main research questions.

RQ1: How does anger influence project status (i.e. retention/termination decisions)?

RQ2: How does sunk cost bias moderate the relationship between anger and project status?

RQ3:How do portfolio considerations (i.e. portfolio balance, strategic fit and portfolio maximum value) moderate the relation between anger, sunk cost bias and project status?

These research questions lead us to the following framework where the relationship between anger and project status is moderated by the sunk cost effect and by portfolio considerations. (see Figure 1)

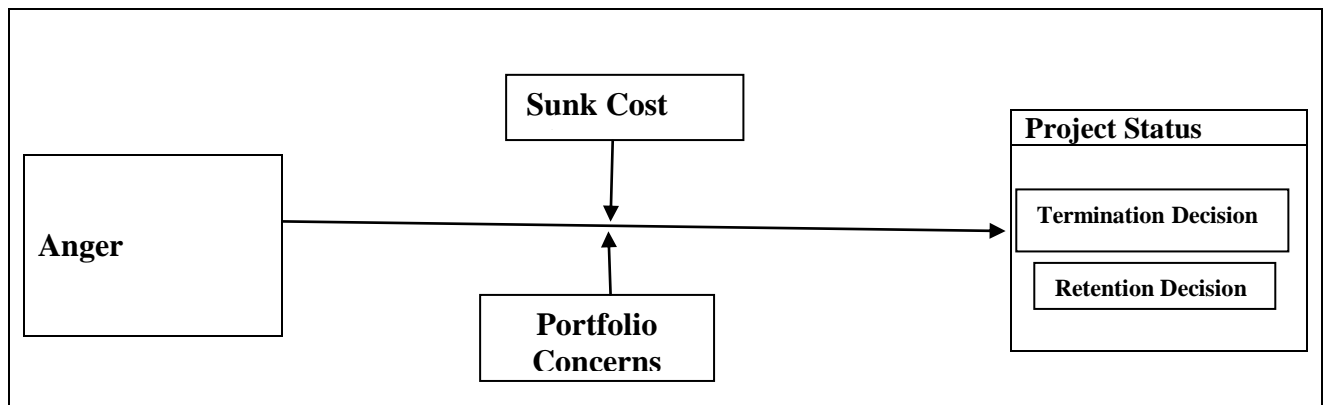


Figure 1: Research Framework. Own representation. Adapted from (Tsai and Young 2010, p.968)(Lerner and Keltner 2000, p. 481) concerning anger, (Behrens and Patzelt 2016, p. 816, 818) (Kester et al. 2011, p.643)(Kester, Hultink, and Griffin 2014, p.1199) concerning the retention–termination portfolio decisions.

We apply this framework to affective events theory (AET). AET is a theory that considers events as the heart of the main cause of affective states or reactions that have essential outcomes in a work context.(Basch and Fisher 1998, p.3; Morris et al. 2011; p.11) This means that environmental features influence affect primarily by making, recalling or imaging affective events. (Morris et al. 2011; p.11) Further, the appraisals of these events produce the experience of specific emotions that, in turn, influence behaviour and attitudes. (Basch and Fisher 1998, p.3; Morris et al. 2011; p.15) Thereafter, attitudes are guided by both the emotional experience and the individual’s experiences and contextual cues (emotions and attitudes) that lead to behavioural responses (Basch and Fisher 1998, p.3; Morris et al. 2011; p.15).

The consequences of affective experience are both attitudinal and behavioural. AET groups behaviours into two categories: affect-driven behaviours and judgment-driven behaviours. Affect-driven behaviours on one hand, flow directly from affective experiences and are not mediated by overall attitudes. Rather, they are influenced by processes such as coping and mood management or by the direct effects of affect on cognitive processing or judgment biases. Judgment-driven behaviours, on the other hand, are mediated by satisfaction. Thus, these behaviours are influenced by the consequences of decision processes considering that one's evaluation of one's job is part of the decision matrix. (Weiss and Russell 1996, p.13)

When our framework is applied to ATE theory, variables are framed as follows. (see Figure 2)

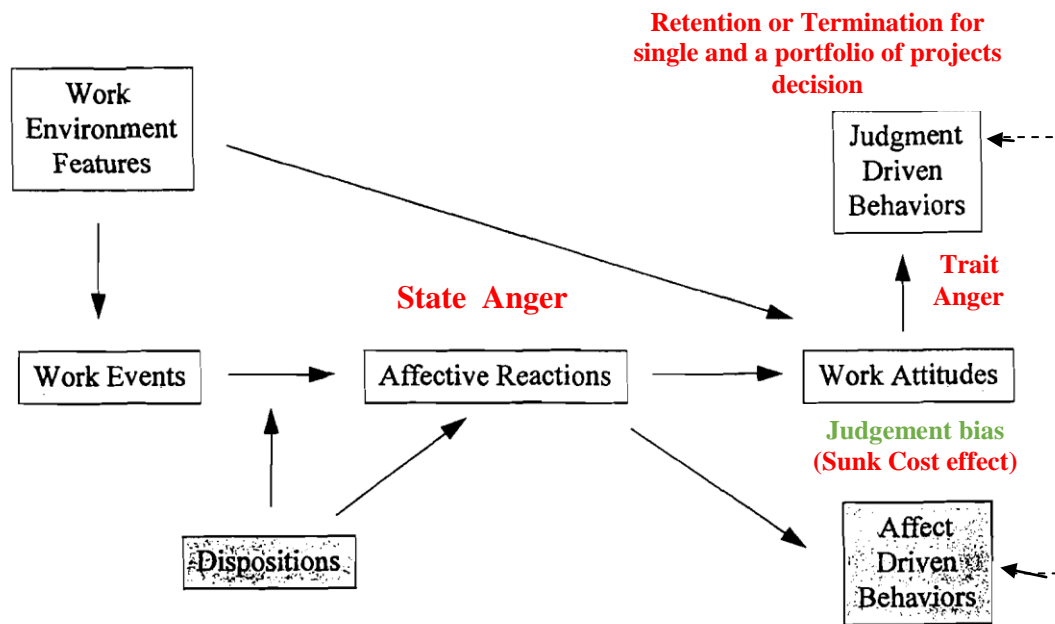


Figure 3. Affective Events Theory: Macro Structure

Figure 2: Theoretical model. Own modification. Adopted from (Basch and Fisher 1998; Morris et al. 2011; Weiss and Russell 1996, p.13)

According to this theoretical framework, we suggest the following propositions.

State anger (as an affective reaction to work events) and trait anger (as an emotional and individual experience that guides work attitude) are presumed to decrease project termination as judgement driven behaviour (Harvey and Victoravich 2009, p.774). Accordingly,

Proposition 1: The relationship between anger and project termination (retention) is negative (positive).

Proposition 2: The relationship between anger and sunk cost effect is assumed to be negative. Also, the relationship between anger and project retention is assumed to be negative.

Proposition 3: The relationship between sunk cost effect and project retention/termination is mixed.

Proposition 4: The relationship between portfolio considerations and project termination is assumed to be positive. Also, the relationship between portfolio considerations and project retention is assumed to be negative.

Research methods project

We tested the above mentioned framework through an experimental pilot study that targeted 44 MBA and psychology student at the University of Glasgow, which then came up with some recommendations for our qualitative interviews. MBA participants were a proxy for top and middle level managers in an experimental research design, and psychology students were chosen as they are more familiar with the psychological context of this research. Also, the experimental method is used to verify the framework, to test the relationships and to pilot the variable of anger as a mood induction method that will be used in interviews.

Employing a mixed method approach, we will conduct semi-structured interviews with top and middle managers of PADICO, a Palestinian leading holding company, to allow for an in-depth exploration of the topic in question to understand in more depth the phenomenon of project termination and retention decisions.

Prior to the interviews, participants will be asked to complete the STAXI survey, a survey that measures their state and trait feelings and behaviours. Thus, anger is tested professionally using survey instruments tested in the psychology literature, particularly using quantitative methods or through experiments and surveys.

During the interviews, four different scenarios will be considered: project retention, project termination, sunk cost bias and portfolio concerns. PADICO Holding, a Palestinian investment company, has been chosen for the study as it comprises all these diverse scenarios.

Four embedded units will form the case studies within PADICO that will be investigated in the study. These will represent two scenarios involving project retention and termination: one scenario will represent project termination (Arab(s) Hotels Company) and another project retention (Nakheel Palestine Company). Also, other projects (Jacir Palace Hotel in Bethlehem and Al-Mashtal Hotel- Gaza) are chosen to investigate sunk cost bias and portfolios that are thought to have moderated these decisions.

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