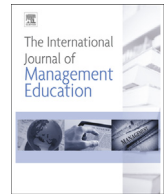


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Research notes

Anticipated emotions towards new venture creation: A latent profile analysis of early stage career starters

Leonidas A. Zampetakis^{a,*}, Manolis Lerakis^a, Konstantinos Kafetsios^b, Vassilis Moustakis^a^a Technical University of Crete, School of Production Engineering and Management, Management Systems Laboratory, Chania, Crete, Greece^b University of Crete, Department of Psychology, Rethymnon, Crete, Greece

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ABSTRACT

The purpose of the present study is to explore students' experiential projections for how new venture creation process will be perceived. Specifically, the study (a) identify anticipated emotions that students predict will experience when they imagine themselves in the process of new venture creation and (b) model anticipated emotion variations with respect to perceived desirability, perceived feasibility and entrepreneurial intent of business startup. A questionnaire survey was completed by a sample ($N = 1160$) of Social Science, Engineering, Science and Business students, across ten Greek universities. Structural equation modelling and latent profile analyses were used. Results provide evidence that students with a family example of entrepreneurship have different emotional predictions compared to students with parents that are employees. Moreover, using anticipated emotions as segmentation variable a four-class taxonomy of students is identified with internal and external validity. The study concludes that anticipated emotions may have a clear adaptive value and provides a basis for persuasive strategies used in an informative way for entrepreneurship education.

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1. Introduction

Research has only recently begun to focus more on the role of affect, mood and emotions in the entrepreneurial process (Baron, 2008). However, contemporary research focuses primarily on the role of "immediate" emotions, experienced at the time of decision making (Baumgartner, Pieters, & Bagozzi, 2008; Podoyntsyna, Van der Bij, & Song, 2012). Emotions, however, can influence decision-making when they are anticipated through affective forecasting, the process of predicting what it would feel like to experience a particular event in the future (Baumgartner et al., 2008; Gilbert & Wilson, 2007). Affective forecasting couples predictions about the future along with the feelings expected to emerge depending on either success or failure (Dunn & Laham, 2006; Mellers & McGraw, 2001). Anticipated emotions, as products of affective forecasting, are the specific emotions one believes will arise from a potential event or course of action (Baumgartner et al., 2008).

The scarcity of research on the role of anticipated emotions in entrepreneurial motivation is surprising, given that entrepreneurs construct and reconstruct both an identity and a new venture by applying "... affective reactions to past and

* Corresponding author.

E-mail address: lzabetak@dpem.tuc.gr (L.A. Zampetakis).

present experiences and the anticipated future” (Morris, Kuratko, Schindehutte, & Spivack, 2012, p. 31). Schwarz (1990) has pointed out that the anticipation of emotion as a consequence of a decision is capable of influencing the decision, as well as the formation of attitudes. Furthermore, the importance of anticipated emotions for goal directed behaviour is acknowledged in several general behavioural models which introduce a variety of anticipated emotions as the determinants of purposive behaviour (Bagozzi, Baumgartner, & Pieters, 1998; Richard, Van der Pligt, & De Vries, 1996).

From a future thinking perspective, the notion that anticipated emotions could be used proactively is particularly relevant to the context of preparing university students (seen as early stage career starters) for an entrepreneurial career through emotion based intervention programme (Hodzic, Ripoll, Lira, & Zenasni, 2015; Lackeus, 2014). Understanding students' anticipated emotions towards new venture creation is a means for not only predicting students' goals, but also for influencing their behaviour (Miceli & Castelfranchi, 2014). Moreover, it would be interesting the identification of student groups based on specific anticipated emotions, and the establishment of relationships between anticipated emotions and a special type of goals, namely entrepreneurial intentions.

From this perspective, this study examines the anticipated experience of new venture creation process and establishes relationships between anticipated emotions and early career starters' entrepreneurial motivation.

1.1. The “what” and “why” of anticipated emotions

Anticipated emotions, are invoked when an individual does not experience any immediate emotions toward the future event in question, but can imagine experiencing certain emotions based on their projected cognitive interpretation (Gilbert & Wilson, 2007; Loewenstein & Lerner, 2003). Thus, anticipated emotions actually involve affective beliefs of how situations are likely to influence emotion. According to Robinson and Clore (2001), anticipated emotions are affective beliefs that are based on pre-factual thinking about the imagined positive or negative consequences of an event. Anticipated emotions are not related to the probability that a given event will occur but reflects the perceived psychological state of the individual in case the event occurs and the individual is involved in it (Mellers & McGraw, 2001).

Anticipated emotions are distinguished from immediate emotions (Baumgartner et al., 2008). Anticipated emotions are cognitions about future emotions. Immediate emotions, Immediate emotions by contrast are experienced at the moment of choice and fall into one of two categories. “Integral” emotions, like anticipated emotions, arise from thinking the consequences of events, but integral emotions, unlike anticipated emotions, are experienced at the moment of choice. “Incidental” emotions are experienced at the moment of choice, but arise from dispositional or situational resources which are not related to the event or choice at hand.

As noted by Loewenstein and Lerner (2003) decision making theories assumes that decision-makers are influenced by anticipated, rather than immediate, emotions. The basic assumption is that when making a decision people attempt to cognitively predict the emotional consequences of each choice and subsequently choose the option that will maximize positive emotions while minimizing negative emotions (Loewenstein & Lerner, 2003).

Anticipated emotions explain additional variance in cognition-behaviour models (Rivis, Sheeran, & Armitage, 2009). Using the theory of planned behaviour (Ajzen, 1991) Sandberg and Conner (2008), concluded that the inclusion of anticipated emotions accounted, on average, for an additional 7% of the variance in intentions. From another perspective, Richard et al. (1996) compared anticipated and immediate emotions in risky behaviour pursuits and concluded that anticipated emotions are important in guiding behaviour by contributing to the adoption of risk aversive behaviour while at the same time immediate emotions had almost no effect.

The previous literature suggests that in permitting people to anticipate how potential future events would make them feel, anticipated emotions enable people to pursue the affective experiences they value. Moreover, research suggests that it is possible to make predictions about what it would feel like to experience any potential future event, no matter how unlikely some of them may seem (Gilbert & Wilson, 2007). To illustrate, although a student may believe that he will never start a new venture, he may still envision being an entrepreneur and make predictions about the emotions that would accompany such an event. Thus, anticipated emotions are not constrained by expectations (i.e., assessments of event likelihood) (Dunn & Laham, 2006; Wilson & Gilbert, 2003).

1.2. How new venture creation “feels” like

The tasks associated with the entrepreneurial process could be sources of positive or negative emotions (Liao, Welsch, & Tan, 2005). Passion, excitement and life satisfaction are some of the positive affective descriptors which are coupled with business ownership (Cardon, Foo, Shepherd, & Winklund, 2012; Cardon, Wincent, Sing, & Drnovsek, 2009). Fear, anxiety, loneliness, and mental strain are some of the negative affective descriptors (Patzelt & Shepherd, 2011).

During the venture creation process, specific emotions may be present. According to Morris et al. (2012), uncertainty and novelty, are among the most important characteristics of the entrepreneurial process. Kato and Wiklund (2011) analysed entrepreneurs' diary blogs, during the pre-launch stage of their business. The records suggested that entrepreneurs experienced highly aroused states in terms of both positive and negative affects. Entrepreneurs reported facing high-levels of uncertainty and fear and fear whilst retaining a hope of success. For example, they often mentioned that they do not need to sleep, or do not mind working constantly to make things happen.

Further evidence for the role of emotional elements in entrepreneurship was provided by [Schindehutte, Morris, and Allen \(2006\)](#). Their results suggested that the entrepreneurial context can be characterized in terms of periods of relatively high pressure, unanticipated stress, uncertainty, and ambiguity and periods of relative stability and predictability.

[Morris, Allen, Kuratko, and Brannon \(2010\)](#) systematically assessed the applicability of a comprehensive set of descriptors to the entrepreneurial experience in order to attain a sense of the affective nature of the new venture context. An examination of these descriptors suggested that the evoked terms reflected both positive (e.g., joyful, hopeful, feeling free) and negative (e.g., feeling disappointment, sense of being lost) affect. An empirical examination of the effective words in terms of exploratory factor analysis and multidimensional scaling suggested that a positive - negative valence dimension and an arousal dimension most effectively reflected the data, consistent with psychological theories of affect ([Watson, Clark, & Tellegen, 1988](#)).

Taken together the above studies suggest that entrepreneurs experience several emotions during the venture creation process: enjoyment (for example, joyful, energizing, and exciting), (e.g., [Morris et al., 2010](#); [Schindehutte et al., 2006](#)) fear (for example, frightened, threatened), distress (lonely) (e.g., [Morris et al., 2010](#)) anger ([Kato & Wiklund, 2011](#); [Schindehutte et al., 2006](#)), interest ([Kato & Wiklund, 2011](#)) and surprise ([Schindehutte et al., 2006](#)).

When it comes to student anticipated emotions towards new venture creation process, the range of emotions that can be anticipated is much wider than that of immediate emotions ([Baumgartner et al., 2008](#)). When students are asked to envision the future and the new venture creation process, they will do more than simply assess the likelihood of this future event. They will also form experiential projections for how new venture creation process will feel.

These anticipated emotions towards new venture creation could shed some light on the underlying students' beliefs and goals (or desires, motives or concerns) as implied in appraisal theories of emotions. According to appraisal theories, emotions are elicited from a subjective evaluation (or appraisal) of a situation or event ([Roseman, Spindel, & Jose, 1990](#); [Smith & Ellsworth, 1985](#)). Appraisal theories specify appraisal profiles for different emotions and that different appraisals are all that is needed to evoke different emotions, even if all other circumstances are the same.

1.3. Overview of the study's aims and hypotheses

The purpose of the present study is to explore students' experiential projections for how new venture creation process will feel like. Specifically, the study examined the anticipated intensity of the six emotions that entrepreneurs experience during their new venture creation process (enjoyment, fear, distress, anger, interest and surprise). Moreover, the study examined whether students anticipate feeling both positive and negative emotions, since previous studies have shown that positive and negative aspects of future experience may be two separate psychological systems rather than opposite ends of a single dimension ([MacLeod & Byrne, 1996](#)).

In this sense, the experiential projections of students with a family example of entrepreneurship (having parents who were entrepreneurs) will somewhat diverge from those with parents that are employees (Hypothesis 1). Research suggests that environmental factors such as parental encouragement and role models influence what young people think about in the future ([Schmitt-Rodermund, 2004](#)). Moreover, a sizeable number of students will predict experiencing both positive and negative emotions at the same time, during new venture creation process (Hypothesis 2). This is in line with the notion of mixed emotions (i.e., affective experiences characterized by the co-activation of two emotions, usually opposite in valence) very often found in the online experience of entrepreneurship ([Morris et al., 2010](#)). Furthermore, anticipated emotions can be used as a segmentation variable for the development of an empirical typology of students' entrepreneurial motivation (Hypothesis 3).

2. Method

2.1. Participants and procedure

Survey data were collected from 1160 students from 10 Greek universities. The majority (49.7%) were social science students (e.g., psychology, education) followed by engineering students (29.1%), science students (e.g., chemistry, physics) (11%), and business students (10.2%). Surveys were administrated individually to students. Students were located during leisure activities and asked to voluntarily participate in a research project regarding factors influencing their future career choice. We did not provide any monetary incentive or extra course credit. Data collection took place at the middle of the 2013 spring semester.

In sum, the sample consisted of 426 male students (36.7%), the mean sample age was 21.61 years ($SD = 2.67$). One hundred and ten participants (9.5%) were postgraduate students. Thirty four percent of the participants reported that one of their parents owned full time business most of the time, while they were growing up, seventy four percent reported that they know an entrepreneur in their close environment. Finally, fifty five percent of the participants reported that they had some prior working experience, as an employee in the past. The survey instrument contained items representing the theoretical constructs along with demographic data.

2.2. Measurement of constructs

Because participants were Greek students, all the scales used were firstly translated into Greek by two researchers fluent in English, who compared their versions until agreeing on the most correct translation, and then back-translated into English by a bilingual, native English speaking translator, following the procedure recommended by Brislin (1981).

2.2.1. Anticipated emotions

To assess students' anticipated emotions towards new venture creation, 18 items from the Differential Emotions Scale (DES), an instrument designed by Izard (1991), were used. The DES is a self-report instrument that utilizes adjectives or phrases (3 items for each emotion) to describe emotions. Respondents were asked to indicate on a single 5-point scale (1-very slightly or not at all to 5-extremely), the extent to which way each of the 18 items describes the way she anticipates feeling for the following situation: "Please imagine a situation where you are involved in on-going but not yet operational business start-up. You have invested no money, no income has been made and the firm is not a legal entity yet".

Confirmatory factor analysis (CFA) of the 18 items using the Mplus software (version 5.21 Muthén & Muthén, 2007) and the maximum likelihood (ML) estimator resulted in an acceptable model fit [χ^2 (120, $N = 1160$) = 875.98, $p < 0.001$; RMSEA = 0.074 (90% CI: 0.069–0.078); CFI = 0.912; TLI = 0.901; SRMR = 0.054]. Cronbach's reliability coefficients ranged from 0.638 (for the emotion of interest) to 0.791 (for enjoyment). The overall score for each emotion and for each respondent was obtained by averaging the scores across the items (3 items for each emotion).

2.2.2. Attitudes towards entrepreneurship (ATT)

Students' ATT was assessed using the five item scale from Linan and Chen (2009). Sample items are: "A career as entrepreneur is attractive for me", "Among various options, I would rather be an entrepreneur". Responses to the five items were made on 7-point Likert-type scales (1 = strongly disagree, 7 = strongly agree). The overall ATT score for each respondent was obtained by averaging the scores across the five items Cronbach's reliability for this scale was 0.913.

2.2.3. Perceived behavioural control (PBC)

Students' PBC was assessed using five items from the scale of Linan and Chen (2009). Sample items are: "To start a firm and keep it working would be easy for me", "I can control the creation process of a new firm". Responses to the five items were made on 7-point Likert-type scales (1 = strongly disagree, 7 = strongly agree). Cronbach's reliability for this scale was 0.869. The overall PBC score for each respondent was obtained by averaging the scores across the three items.

2.2.4. Entrepreneurial intention (INT)

Students' entrepreneurial intent was assessed using the scale originally developed by Thompson (2009). This is a reliable and internationally applicable individual entrepreneurial intent scale. It includes ten items, four of which are distracter items that act as red herrings and were not included in scale analyses. Sample items are: "Intend to set up a company in the future", "I have no plans to launch my own business" (reverse scored). Responses to the six items were made on 7-point Likert-type scales (1 = strongly disagree, 7 = strongly agree). Coefficient alpha for this scale was 0.89. The overall INT score for each respondent was obtained by averaging the scores across the six items.

2.2.5. Anticipated positive and negative affect towards new venture creation

To assess students' overall positive and negative anticipated affect towards new venture creation, Larsen's et al., (2009) evaluative space grid (ESG) was used. ESG is a two-dimensional grid that provides a single-item measure of positivity and negativity. Students were asked to indicate how positive and negative they anticipate feeling from new venture creation process on a 5-point scale (0-not all, to 4-extremely). The grid was presented on paper and respondents made a mark on the appropriate cell.

2.2.6. Control variables

Student's gender, age, entrepreneurial role models (having a parent that is an entrepreneur and knowing entrepreneurs in their close environment) were used as control variables. Previous research suggests that demographic characteristics appear to influence perceptions of desirability (Shook, Priem, & McGee, 2003).

3. Results

3.1. Statistical method considerations-analytical strategy

All factor analyses were performed using the Mplus (version 5.21) software (Muthén & Muthén, 2007) and the maximum likelihood (ML) estimator. Several statistics were employed in order to assess model fitness (Shook, Ketchen, Hult, & Kacmar, 2004): (a) Root Mean Square Error Approximation (RMSEA): 0 = an exact fit, < 0.05 = a close fit, 0.05–0.08 = a fair fit, 0.08–0.10 = a mediocre fit, and > 0.10 = a poor fit (Mplus also computes a 90% confidence interval around RMSEA); (b) Comparative Fit Index (CFI): best if above 0.9; (c) Tucker–Lewis Index (TLI): best if above 0.9; (d) Standardized Root Mean Square Residual (SRMR): best if < 0.08 , (e) Akaike Information Criterion (AIC). For model comparisons, smaller values in AIC

represent a better fit of the model. To avoid problems associated with common method variance often found in cross sectional survey research, several steps were taken described in Podsakoff, MacKenzie, Lee, and Podsakoff (2003).

To assess discriminant validity of the constructs, we compared the measurement model with a model that constrained the correlations among the constructs to be equal and examined the change in chi-square (χ^2). The nine factor model, representing each latent variable as a separate construct, was found to be superior to a one-factor model.

In order to identify clusters of individuals that have similar values on the six anticipated emotions, the Latent Profile Analysis (LPA) method was employed. Model parameters were estimated using the Robust Maximum Likelihood (MLR) estimator as implemented in Mplus. To determine the number of latent classes that should be used, in LPA, several statistics were employed (Nylund, Asparouhov, & Muthén, 2007): the AIC and sample-size-adjusted BIC (sBIC) where lower values of s-BIC and AIC are indicative of better model fit. The entropy statistic was used to account for separation in the estimated posterior probabilities and to adjust for over-parameterization compared to a single segment model.

The LPA was conducted in an exploratory fashion. A single-class model was examined first, and classes were added until no further improvements were observed. Finally, the bootstrap likelihood ratio test was used (BLRT; Nylund et al., 2007) to gain confidence concerning the correct number of classes. The BLRT compares the estimated model to a model with one class fewer than the estimated model. The p value obtained in the test is an approximation of the probability that the data have been generated by the model with one less class, thus, a low p value indicates that the model with one less class is rejected in favour of the estimated model.

3.2. Descriptive statistics

Table 1 presents mean, standard deviation and correlation across selected variables. Anticipated emotions were correlated to their corresponding measure of anticipated affective valence. For example positive anticipated affect was positively correlated to anticipated interest (0.25, $p < 0.01$), enjoyment (0.37, $p < 0.01$) and negative anticipated affect correlated to anticipated distress (0.18, $p < 0.01$), anger (0.12, $p < 0.01$), and fear (0.13, $p < 0.01$). An exception was anticipated surprise, which was correlated positively to negative anticipated affect (0.11, $p < 0.01$).

On average, students affective forecasts were more positive ($M = 2.49$, 95% Confidence Interval: 2.42–2.54) than negative (NA) ($M = 1.59$, 95% Confidence Interval: 1.52–1.63). Anticipated positive affect related positively (0.44, $p < 0.01$) to ATT (i.e., perceived desirability of new venture creation), while anticipated negative affect related negative to PBC (i.e., perceived feasibility of new venture creation). This finding corresponds to previous research suggesting that students generally consider desirable the option to create their own business (e.g., Veciana, Aponte, & Urbano, 2005).

Independent *t* tests showed that there were significant differences between students with a parent that owns a business (Sentre; $N = 400$) and students with parents working as employees (Semplo; $N = 760$) in terms of: anticipated enjoyment ($M_{\text{sentre}} = 3.20$, $SD = 0.95$; $M_{\text{semplo}} = 3.07$, $SD = 0.97$), [$t(1158) = 2.29$, $p < 0.01$]; anticipated fear ($M_{\text{sentre}} = 2.11$, $SD = 0.93$; $M_{\text{semplo}} = 2.24$, $SD = 0.96$), [$t(1158) = -2.15$, $p < 0.01$]; anticipated positive affect ($M_{\text{sentre}} = 2.57$, $SD = 1.02$; $M_{\text{semplo}} = 2.44$, $SD = 0.99$), [$t(1158) = 2.02$, $p < 0.05$] and anticipated negative affect ($M_{\text{sentre}} = 1.47$, $SD = 0.99$; $M_{\text{semplo}} = 1.63$, $SD = 0.98$), [$t(1158) = -2.56$, $p < 0.01$]. The anticipated emotional experience of new venture creation for students with entrepreneurial parents differs from the anticipated experience of students with parents working as employees. Thus, hypothesis 1 was supported.

Fig. 1, provides the bivariate distribution along with number of students anticipating the various combinations of the “positive” and “negative” affect. As can be seen a large number of students anticipate to experience mixed positive and negative affect at the same time. This suggests that affective forecasts of the process of new venture creation relates to a combination of positive and negative emotions and that students who are perceived as indifferent about new venture creation and entrepreneurship in general may actually hold strong, yet conflicting, views about the entrepreneurial process. As expected results provide evidence that early career starters anticipate feeling both positive and negative emotions when asked to imagine themselves in the future, being in the position of starting their business. Thus, hypothesis 2 was supported.

Moreover, results support previous research (Peterman & Kennedy, 2003; Veciana et al., 2005) and the view that entrepreneurial intentions (INT) relate to attitudes towards entrepreneurship (ATT) (0.55, $p < 0.01$) and perceived behavioural control (PBC) (0.49, $p < 0.01$). Moreover, we have found higher average entrepreneurial intentions for male ($N_{\text{male}} = 426$) compared to female students ($N_{\text{female}} = 736$) ($M_{\text{male}} = 2.88$, $SD = 1.45$; $M_{\text{female}} = 2.55$, $SD = 1.30$), [$t(811.85) = 3.82$, $p < 0.001$], which is line with contemporary research results (see Haus, Steinmetz, Isidor, & Kabst, 2013), providing further evidence of external validity. Female students, however, predicted new venture creation to be more interesting ($M_{\text{male}} = 3.80$, $SD = 0.78$; $M_{\text{female}} = 3.90$, $SD = 0.84$), [$t(1158) = -2.18$, $p < 0.05$] and anticipated more fear compared to male students ($M_{\text{male}} = 2.08$, $SD = 0.95$; $M_{\text{female}} = 2.26$, $SD = 0.96$), [$t(1158) = -3.09$, $p < 0.001$].

3.3. Latent profile analysis

A total of five LPA models were examined, ranging from one to five classes. Each model was estimated with 200 random starts, and no problems with local maxima were found. The one-class solution exhibited a poor fit with the data relative to the other models. The five class solution did not converge. The entropy values for all models were very similar and greater than 0.85, indicating that anticipated emotions were good predictors of class membership. Overall, the four-class solution exhibited the best empirical fit with the data based on s-BIC, and AIC. The BLRT test was used in the present study to

Table 1
Descriptive statistics and inter-correlations for the total sample (N = 1160).

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender ^a	1.63	0.48	1.00														
2. Age	21.61	2.67	-0.14**	1.00													
3. Parents ^b entrepreneurs	1.66	0.48	-0.01	-0.06*	1.00												
4. Know ^c entrepreneurs	1.26	0.44	0.01	-0.12*	0.25**	1.00											
5. Positive anticipated affect	2.49	1.01	-0.01	0.01	-0.06*	-0.07*	1.00										
6. Negative anticipated affect	1.58	0.99	0.05	0.01	0.08*	0.03	-0.26**	1.00									
7. ATT	4.08	1.42	-0.07*	0.09**	-0.07*	0.44**	-0.15**	1.00									
8. PBC	2.99	1.27	-0.16**	0.12*	-0.12**	-0.12**	0.34**	0.41**	1.00								
9. INT	2.68	1.37	-0.11**	0.16**	-0.16**	-0.11**	0.26**	0.55**	0.49**	1.00							
10. Interest	3.86	0.81	0.05	-0.03	0.04	-0.11**	0.25**	0.19**	0.10*	0.10	1.00						
11. Enjoyment	3.12	0.97	0.05	-0.05	-0.07*	0.00	0.37**	0.26**	0.24**	0.16**	0.47**	1.00					
12. Surprise	2.15	0.93	-0.01	-0.09**	0.03	0.08**	0.03	0.11**	0.09**	0.04	0.14**	0.05	1.00				
13. Distress	1.93	0.90	0.02	0.00	0.03	0.08**	-0.21**	0.18**	-0.07**	-0.10**	0.05	-0.27**	0.14**	1.00			
14. Anger	1.81	0.94	-0.03	0.05	0.05	0.09**	-0.12**	0.14**	-0.04	-0.04	0.09**	-0.20**	-0.35**	0.45**	1.00		
15. Fear	2.19	0.96	0.09**	-0.09**	0.06*	0.07*	-0.13**	0.17**	-0.05	-0.13**	-0.08**	-0.16**	-0.16**	0.67**	0.63**	1.00	

* $p < 0.05$ (two tailed), ** $p < 0.01$ (two tailed).

NOTE.

^a Gender is coded: 1 = male 2 = female.

^b Parents own a business is coded: 1 = yes 2 = No.

^c Know entrepreneur is coded: 1 = yes 2 = No.

determine whether a four-class solution would fit the data better than a five-class solution. The BLRT yielded a highly significant p-value for the comparison of four classes over three, suggesting that the four classes are better than the three. Individuals are classified very well indeed into these four classes.

Next, the estimated mean values for each anticipated emotion by each class were plotted. Classes were distinguishable. The profiles for each class are displayed graphically in Fig. 2. Next the internal and external validity of the four class model, was examined.

More specifically, on the basis of the LPA findings, the four-class model internal validity was examined. That is to say, it was examined if the classes are really distinct in terms of the anticipated emotions. In Table 2, both the class means and the results of the analysis of variance (ANOVA) tests are presented. Overall, the individual ANOVA tests (with Games-Howell post hoc comparisons) indicated that there are differences between the classes in all anticipated emotions at the 0.001 level. The four distinct classes that were found within the data set were: Class 1 (N = 307; 26.7%), Class 2 (N = 393; 34%), Class 3 (N = 292; 24.7%), and Class 4 (N = 168; 14.6%). Table 2 and Fig. 2 present the segment variable profile for the four classes.

Next, on the basis of the LPA findings, the four-class model external validity was examined; that is, the homogeneity and the distinctiveness of the classes in terms of gender, age, entrepreneurial parents, know entrepreneurs, attitudes towards entrepreneurship (ATT), perceived behavioural control (PBC) and entrepreneurial intention (INT) was tested. Results indicate significant differences between and within the classes with regard to external variables (Table 3). Thus, hypothesis 3 was supported.

4. Discussion

Recent studies have demonstrated the importance of emotions in entrepreneur's cognition and behaviour (Baron, 2008; Podoyntsyna et al., 2012); yet, entrepreneurship researchers have paid less attention to the role of anticipated emotions in the entrepreneurial process. The present study, offers insights on anticipated emotions towards new venture creation. Moreover, the present study, students were considered to be early stage career starters. The identification of early career starters with increased entrepreneurial motivation before there is any observable action has important implications for policy while it facilitates private investment and public funding being most efficiently channelled toward those who will start new businesses that create value for individuals and society.

The present study, extends previous work concerning the online experience of entrepreneurship (Morris et al., 2010; Schindehutte et al., 2006), to

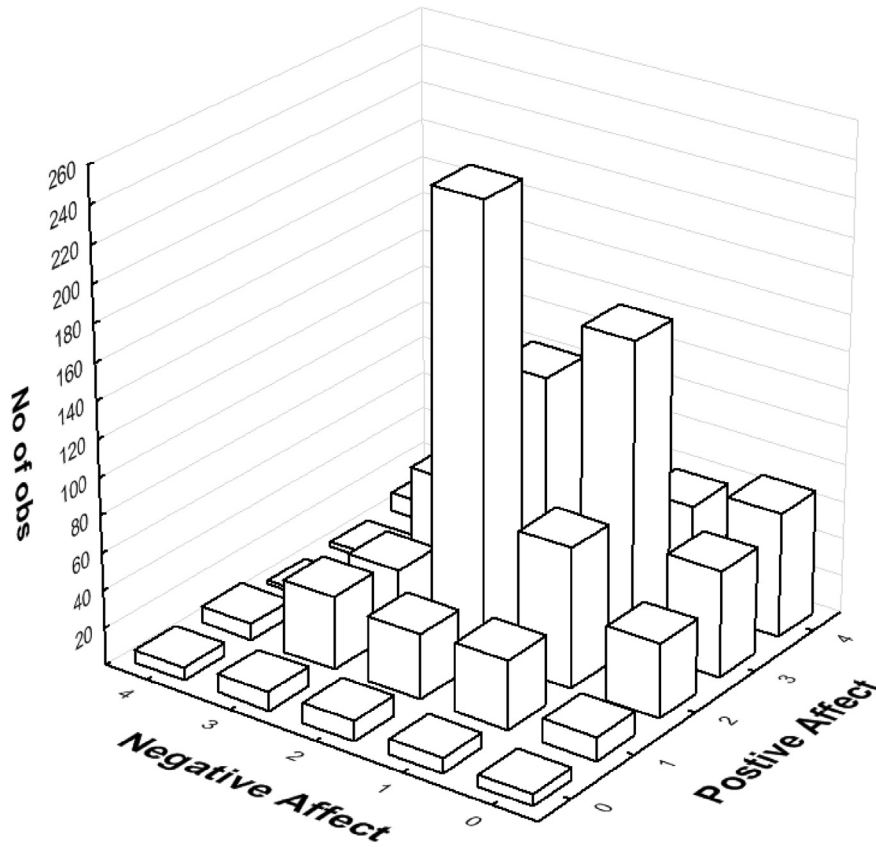


Fig. 1. Bivariate distribution of positive and negative anticipated affect from new venture creation.

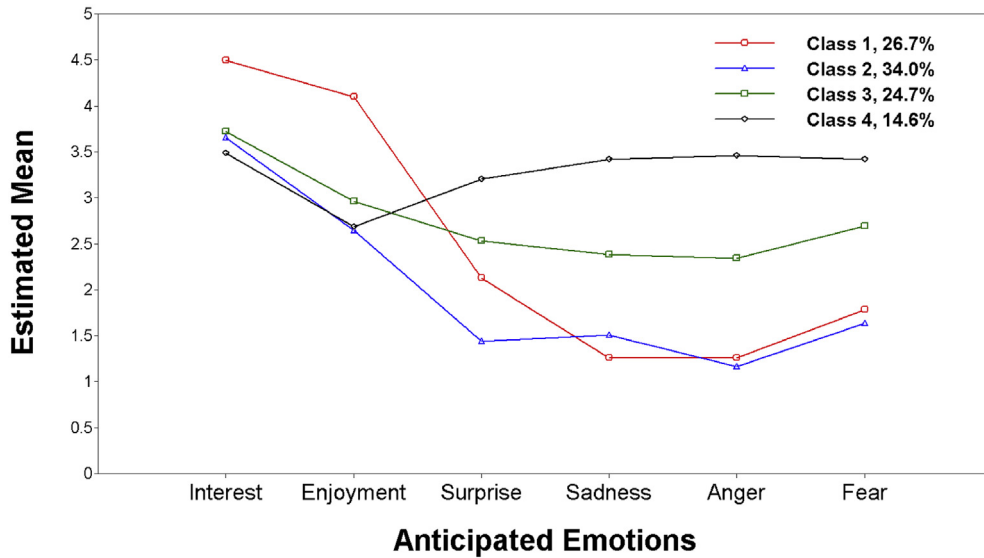


Fig. 2. Four class solution of Latent Profile Analysis representing the anticipated emotions towards new venture creation. Horizontal axis captures anticipated emotions and vertical axis captures scores.

the *anticipated emotional experience* of entrepreneurship: Interest is the emotion that on average, students anticipate feeling with the highest intensity, followed by joy, fear, sadness and anger (see Table 1). Results provide evidence to suggest that early career starters anticipate feeling both positive and negative emotions when asked to imagine new venture creation (Fig. 1).

Table 2
Anticipated emotions per class.

Anticipated emotion	Class 1(N = 307)			Class 2(N = 393)			Class 3(N = 292)			Class 4(N = 168)			One way ANOVA	
	M	SD		M	SD		M	SD		M	SD		F ^b	p
Interest	4.53	0.48	(2,3,4) ^a	3.63	0.71	(1,3,4)	3.72	0.81	(1,4)	3.47	0.87	(1,3)	188.14	<0.001
Enjoyment	4.18	0.56	(2,3,4)	2.58	0.63	(1,3)	2.96	0.81	(1,2,4)	2.69	0.93	(1,3)	462.43	<0.001
Surprise	2.14	0.87	(2,3,4)	1.42	0.49	(1,3,4)	2.52	0.70	(1,2,4)	3.22	0.75	(1,2,3)	380.81	<0.001
Distress	1.25	0.37	(2,3,4)	1.51	0.47	(1,3,4)	2.38	0.59	(1,2,4)	3.43	0.62	(1,2,3)	735.08	<0.001
Anger	1.26	0.38	(2,3,4)	1.15	0.26	(1,3,4)	2.34	0.54	(1,2,4)	3.48	0.56	(1,2,3)	1222.11	<0.001
Fear	1.78	0.70	(2,3,4)	1.62	0.57	(1,3,4)	2.70	0.79	(1,2,4)	3.44	0.77	(1,2,3)	339.69	<0.001
Positive Anticipated Affect	2.97	0.88	(2,3,4)	2.30	1.05	(1)	2.39	0.91	(1)	2.21	1.00	(1)	40.81	<0.001
Negative Anticipated Affect	1.36	1.06	(2,3,4)	1.54	0.94	(3)	1.67	0.96	(1)	1.88	0.91	(1,2)	11.41	<0.001

NOTE: Numbers in bold indicate the highest group average for that measure.

Class order follows the graphical presentation of the four classes presented in Fig. 2.

^a Latent Class numbers from which the class was significantly different at the 0.05 level of significance indicated by the Games-Howell pairwise comparison procedure.

^b Welch statistic (asymptotically F distributed).

Table 3
Latent profile differences on external validation variables.

	Class 1		Class 2		Class 3		Class 4		One way ANOVA					
	M	SD	M	SD	M	SD	M	SD	F	p				
Gender ^a	1.68	0.47	1.60	0.49	1.62	0.49	1.64	0.48	H ^e = 5.309	0.151				
Age	21.29	2.60	22.05	2.85	(1,3,4)	21.42	2.67	(2)	21.48	2.20	(2)	F ^f = 5.35	<0.001	
Parents entrepreneurs ^b	1.64	0.48	1.64	0.48	1.67	0.47	1.68	0.47	H ^e = 1.51	0.680				
Know entrepreneurs ^c	1.21	0.40	(3,4)	1.23	0.42	(4)	1.30	0.46	(1)	1.35	0.48	(1,2)	H ^e = 15.11	<0.001
ATT	4.47	1.34	(2,3,4)	3.88	1.44	(1)	4.00	1.32	(1)	3.95	1.56	(1,2)	F = 11.97	<0.001
PBC	3.35	1.27	(2,3,4)	2.81	1.35	(1)	2.87	1.12	(1)	2.91	1.20	(1)	F = 11.98	<0.001
INT	2.81	1.37	(2)	2.44	1.33	(1,3)	2.64	1.27	(4)	3.03	1.53	(2,3)	F = 8.01	<0.001

NOTE: Numbers in bold indicate the highest group average for that measure.

Class order follows the graphical presentation of the four classes presented in Fig. 2.

^a Gender is coded: 1 = male 2 = female.

^b Parents own a business is coded: 1 = yes 2 = No.

^c Know entrepreneur is coded: 1 = yes 2 = No.

^d Latent Class numbers from which the class was significantly different at the 0.05 level of significance indicated by the Games-Howell pairwise comparison procedure.

^e Results are based on the Kruskal–Wallis non parametric test.

^f Welch statistic (asymptotically F distributed).

This implies that anticipated positive and negative affect are relatively independent dimensions and do not represent the ends of a continuum (MacLeod & Byrne, 1996).

Moreover, it was found that students with entrepreneurial role models predicted that, new business creation process will be more positive, with more joy and less fear compared to prediction of students with parents working as employees. Previous research has shown that greater family support relates to positive future expectations (Massey, Gebhardt, & Garnefski, 2008). Results provide evidence to suggest that entrepreneurs as parents may cultivate positive cognitions (i.e., anticipated emotions) to their children, about the venture creation process. An anticipated positive emotional experience relates positively to increased entrepreneurial motivation (Table 1). Findings are in line with research suggesting that positive core affect activates an approach action tendency (Seo, Bartunek, & Barrett, 2010). This is an important finding considering that the anticipated emotions assessed in the present research measure a “pre-actional” form of emotion (i.e., predicted emotions before there is any observable action).

Next, distinct profiles of early career starters were identified by means of latent profile analysis. Results, point to a four-class model, with both internal and external validity. In terms of entrepreneurial intent members of class 1 and class 4 have the strongest motivation to start their own business (Table 2). For the members of class 1, entrepreneurial intentions are formed because perceived feasibility and perceived desirability are both high. In line with Fitzsimmons and Douglas (2010), this class is labelled as “natural” entrepreneurs. For the members of class 4, entrepreneurial intentions are formed because they consider new venture creation to be highly desirable and feasible enough. This class is labelled as “inevitable” entrepreneurs (Fitzsimmons & Douglas, 2010).

Members of class 1, compared to the other classes, were most likely to anticipate feeling positive affect compared to negative affect (Table 2). Their affective forecasts were more likely to include with more intensity the positive emotions of interest and enjoyment (i.e., emotions of approach and achievement; Pekrun, Elliot, & Maier, 2006) and less likely negative

emotions. Respondents in this class consider new venture creation as a highly desirable and feasible procedure, compared to the respondents of the other classes (Table 3); this in turn facilitates the development of strong entrepreneurial intentions.

Members of class 4 have also strong entrepreneurial intentions (no significant differences with class 1). What is interesting however is that members of class 4 were most likely to anticipate feeling increased levels of negative affect. Their forecasts include the negative emotions of distress, fear and anger and the emotion of surprise. Member of this class have strong entrepreneurial intentions because they consider new venture creation as desirable. However, they feel rather uncertain about the underlying skills, education and experience needed to start their own business.

Members of the other two classes seem to have the same levels of perceived desirability and feasibility (Table 3). However, members of class 3 have slightly higher entrepreneurial intentions. This is an interesting finding, since members of class 3, predict that new venture creation will feel more negative compared to class 2 members (Table 2). Class 3 members anticipate feeling with greater intensity the emotions of fear and anger among other. It seems that members of this class consider the emotions of anger and fear useful, for the promotion of their long-term goals (Tamir, 2009).

4.1. Practical implications

Empirical research on emotions in entrepreneurial education is in an early stage (Lackeus, 2014) and results presented herein, offer several implications for entrepreneurship educators to fine-tuned segmentation strategies. An anticipated experience perspective towards entrepreneurship relates to approach and avoidance motivation as a function of anticipated affective valence.

Robinson and Clore (2001) provided empirical evidence that anticipated emotions are to a large extent caused by the same interpretations of characteristics of the events like immediate emotions. In keeping with cognitive appraisal theory, each specific emotion can be deconstructed as a function of several associations underlying the emotional experience, termed cognitive appraisals. Moreover, according to social appraisal theory (Manstead & Fischer, 2001) when we perceive others' emotional reactions to an event, we infer the underlying appraisals.

For example, the anticipation of the emotion of fear suggests that individuals appraise the process of starting a new business as a situation with low control and maximal uncertainty over events and their consequences. Educators should play emphasis on increasing their students' self-efficacy, and uncertainty and ambiguity tolerance because fear triggers a sense of uncontrollability and leads to reduced activities, little innovation, and internal focus and a desire to preserve integrity.

Moreover, educators could use students' anticipated emotions as means in trying to modify students' beliefs and goals towards new venture creation. According to Miceli and Castelfranchi (2014), persuasion "through appeal to anticipated emotions" is a promising strategy, where educator's communication is meant to modify student's beliefs by anticipating the emotion student will feel as a consequence of his or her own choices, as a means for increasing the value of student's goal (such as entrepreneurial intention) of feeling that emotion.

4.2. Limitations

The study findings should be interpreted with caution for a number of reasons. Although the sample size was adequately large to be able to assume high statistical power for statistical analysis, the results are specific to one culture (Greek students). However, results may be generalized to a great extent in other cultures too, since the appraisals that correspond to the emotions in basic emotion theories, are considered universal (Mauro, Sato, & Tucker, 1992). Scholars are encouraged to examine the propositions presented herein, with students across different countries. Second, although recent research supports the idea that affective forecasts can often guide decision-making (Baumeister, Vohs, DeWall, & Zhang, 2007), the approach adopted in the present research was exploratory. The degree to which anticipated emotions influence decisions may also depends on whether students view their emotions as appropriate guides for choice. Third, given this study's cross-sectional nature, a possibility exists that students may move from one cluster to another. Future research is warranted to investigate whether students belong to multiple clusters. Fourth, in the present study, students' perceptions were assessed and not entrepreneurs' behaviours. No actual action-driven variable was involved in the research design as a criterion to verify validity of the identified emotions classes. Using a sample of students is justified, because we focus on factors that may affect the intentionality of potential entrepreneurs toward entrepreneurial behaviour. However, intentionality does not automatically imply behaviours. These limitations represent, in any case, opportunities to advance in our efforts to better understand students' entrepreneurial intent.

4.3. Conclusion

In conclusion, the research presented herein, empirically examined anticipated emotions towards new venture creation and provided a taxonomy. The present study adds to the theory on entrepreneurial emotions, by investigating the anticipated experience of venture creation and findings hold promise for further investigations of the role of affective forecasting in entrepreneurial research. Such a perspective may be promising in enhancing available pedagogical tools for the development of entrepreneurship education. Overall, the research demonstrated that applying an anticipated emotions approach to understanding new business creation has important merit.

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