




# “Personal agency and entrepreneurial intentions among business students”

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# PERSONAL AGENCY AND ENTREPRENEURIAL INTENTIONS AMONG BUSINESS STUDENTS

## Abstract

Entrepreneurship literature refers to entrepreneurial activity as an agency and has established intention as the most critical antecedent of entrepreneurial behavior. The study investigates the relationship between personal agency and entrepreneurial intention using a sample of students considering their entry into employment. The study draws on an agency theory that incorporates actors' temporal orientations. Since intention can be regarded as a possible manifestation of one's agentic perceptions, introducing the notion of time in the study of intention would provide additional insight into the entrepreneurial intention process. A moderated mediation model was applied, and survey data of 537 business students attending a Greek public university were used. The findings indicated that students' perceptions of agentic capacities stimulate their entrepreneurial intention. Specifically, emancipation, defined as one's present judgment of having the capacity to construct courses of action in relation to career matters, explains further the development of self-reported intentions by affecting perceived behavioral control and individual attitudes; this variable has a more significant influence. The findings also indicated that future orientation, defined as one's perceptions of having the capacity for long-term planning, influences the effect of emancipation on entrepreneurial intention by making positive attitudes toward entrepreneurship more salient.

## Keywords

emancipation, future orientation, entrepreneurial intentions, temporality, undergraduate students

## JEL Classification

M13, M21, I25

## INTRODUCTION

Given the significance of entrepreneurial activity in increasing a country's productive capacity and a region's growth by providing employment (Audretsch & Thurik, 2004; Van Praag & Versloot, 2007), entrepreneurship theory and research aim to provide insights to predict and foster entrepreneurial behavior. Psychologically-based theories of entrepreneurship emerging in the '80s construe entrepreneurial behavior in terms of the intentionality of action. The approach postulates that all actions and behaviors have reasons behind them, defined as "an indication of a person's readiness to perform a behavior" (Ajzen, 1991, p. 1122). It is also denoted as cognition before the action itself (Bird, 1988; Ajzen, 1991). Therefore, considering social and cognitive psychology, several models were created and used in entrepreneurial studies, given that entrepreneurial behavior is deliberate, non-compulsory, organized, and thus intentional (Bird, 1988; Ajzen, 1991; Krueger, 2009).

The concept of agency in terms of innovation, value creation, and emancipation underlies entrepreneurship theory. This functional view of entrepreneurship assumes a dominant perception of an individual and agency as the main sources that motivate entrepreneurial activity

(McMullen et al., 2020; Rindova et al., 2009). However, from an empirical standpoint, little importance has been attached to exploring the agentic processes involved in entrepreneurial intentions. This paper suggests that knowledge of entrepreneurial intention formation further needs to consider aspects of personal agency involved in the process.

Anderson et al. (2002, p. 4) concluded that an essential part of the ability to intend, choose means, and guide actions to their ends is bound up with an accurate assessment of particular abilities and capacities as practical agents. Adopting personal agency as a perspective to examine entrepreneurial intention involves centralizing the self as “a site from which a person perceives the world as a place from which to act” (Harré, 1998, p. 3). It is crucial to understand that temporality in that perceptions of self and reality are closely related to the time they are conceived. Individuals conceive themselves as agents when they can grasp “the larger temporal arc” of their acts (when connecting the past, present, and future dimensions of an act in the momentary present) (Bratman, 2010, p. 7). In this respect, time is considered a fundamental dimension of human awareness, cognition, motivation, and action (Lewin, 1951; Nuttin & Lens, 1985; Bandura, 2006).

Entrepreneurial behavior presupposes intentionality brings forward the need to study entrepreneurial intention concerning temporal contexts of the agency. Therefore, the study focuses on how entrepreneurial intention and temporal contexts of the agency are related and how entrepreneurial intention is affected. The examination of this relationship provides meaningful insights into the association between temporal agency and intention. Furthermore, it throws some light on how time-sensitive processes affect the entrepreneurial process.

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## 1. LITERATURE REVIEW AND HYPOTHESES

The theory of agency was identified as most pertinent in analyzing variations in entrepreneurial intention caused by differences in self-perceptions of agentic capacities as it highlights its temporally situated aspects (Emirbayer & Mische, 1998). Their approach focuses on the interplay of temporal orientations within different contexts of action locating agency in people’s ability to shape responsiveness to such contexts. In this respect, any act, including that of intention formation, is not seen as predetermined by behavioral goals detached from concrete situations but as developing along with means “coterminously within contexts that are themselves ever-changing and thus always subject to reevaluation and reconstruction” (Emirbayer & Mische, 1998, p. 967). By way of explanation, agency is described as past knowledge oriented toward the future and acknowledging emerging demands of the present. These temporally directed agentic elements are labeled as “iterational,” “projective,” and “practical-evaluative,” respectively.

The iterational element is “the selective reactivation by actors of past patterns of thought and action,

routinely incorporated in practical activity, thereby giving stability and order to social universes and helping to sustain identities, interactions, and institutions over time.” The concept of projectivity concerns “the imaginative generation by actors of possible future trajectories of action, in which received structures of thought and action may be creatively reconfigured in relation to actors’ hopes, fears, and desires for the future.” Finally, the practical-evaluative element entails “the capacity of actors to make practical and normative judgments among possible alternative trajectories of action, in response to the emerging demands, dilemmas, and ambiguities of presently evolving situations.”

Emirbayer and Mische (1998, p. 1012) claim that in any concrete action, all three elements resonate in that individuals, using past patterns, predicting possible future pathways, and harmonizing their actions to the emerging situations.” However, they exemplify that the particular situation in which the individual is situated determines the temporal orientation of agency as being predominantly iterational, projective, or practical-evaluative (Emirbayer & Mische, 1998, pp. 971-972). In other words, an actor’s temporal orientation determines how the agency is exerted. It follows that “this per-

sonal sense of agency is variable both within an individual (across time and situation) and between individuals” (Hiltin & Long, 2009, p. 141). Thus, the agency elements mentioned above can serve as analytical distinctions for empirical research purposes, i.e., they can be employed as explanatory variables to trace temporal variances within different contexts for action (Emirbayer & Mische, 1998; Hiltin & Elder, 2007).

Taking into account that entrepreneurial intentions are associated with temporal considerations, for they concern present judgments to future behavior, the practical element, as depicted in the emancipation construct, and the projective element, as portrayed by the future orientation construct, are of particular relevance to the purpose of this study. On the other hand, the iterational element is not explored in this study per se as it refers to agency guided by routine action or role enactment, hence incompatible with entrepreneurial intention as examined here, i.e., focusing on its properties of planning and goal-setting.

Given that agency is perceived according to the life domain, it is employed and acknowledges the centrality of personal agency in career choice (Chen & Hong, 2020). Therefore, it seems expedient to investigate the causal relationship between individuals’ active engagement in constructing their career and their intention to become entrepreneurs. This is expressed in the emancipation construct, which encompasses one’s judgment of having the capacity and the potential to set career plans within the present circumstances. The emancipation construct captures the practical element of agency, which involves present-oriented agency in response to individual challenges arising in the contemporary complex social and cultural contexts.

Under the theory of planned behavior assumption (Ajzen, 1991), causal links between emancipation and entrepreneurial intentions are traced through two proximal elements of intention. They are perceived behavioral control and personal attitude (Kolvereid, 1996; Autio et al., 2001; Liñán & Chen, 2009). Entrepreneurial attitude refers “to the degree to which an individual holds a favorable or unfavorable appraisal of being an entrepreneur” (Liñán & Chen, 2009, p. 596). It is governed by beliefs “linking the behavior to a certain outcome

or some other attribute” (Ajzen, 1991, p. 191). The perceived behavioral control construct explains voluntary actions, an intrinsic part of the behavior of interest. This study considers this construct as entrepreneurial self-efficacy. It refers to “the strength of a person’s belief that he or she is capable of successfully performing the various roles and tasks of an entrepreneur” (Chen et al., 1998, p. 301). The construct of subjective norm, describing “perceived social pressure to perform or not to perform the behavior” (Ajzen, 1991, p. 188), is not considered a mediator because of its ambivalent predictive validity (Autio et al., 2001; Liñán & Chen, 2009).

Attitudes and control beliefs are considered here as mediators in emancipation; the following arguments also support intention relationship. First, the view of attitudes leading people to form intentions and subsequently adopt behaviors (Allport, 1935; Ajzen, 1991) implies what Van Vuuren and Cooren (2010, p. 86) call “the agency of attitudes.” In this respect, people’s attitudes can determine the choice of specific courses of action. Thus, a connection is presumed between one’s attitude toward an entrepreneurial career and his/her beliefs in the capacity to influence career choices. Further, perceptions of career agentic capacities correspond with perceived behavioral control, as the latter regulates individuals’ judgments, decisions, and choices. Finally, Bandura (2006, p. 170) claimed, “unless people believe they can produce desired effects by their actions, they have little incentive to act, or to persevere in the face of difficulties.” Conceived as a constituent motivating mechanism of personal agency, the construct is expected to relate to emancipation beliefs. Based on this analysis, it is assumed that emancipation can influence entrepreneurial intention via personal attitude and control beliefs jointly considering mediators in the emancipation-entrepreneurial intention relationship.

The projective aspect of agency, focusing on “how agentic processes give shape and direction to future possibilities” (Emirbayer & Mische, 1998, p. 984), is of particular relevance to this study. Thus, intentions are cognitive representations of future behaviors. Projectivity hinges on cognitive and motivational aspects of agency, which in social psychology have been considered under the notion of “time spec-

tive.” Broadly, it is “the totality of the individual’s views of his psychological future and past existing at a given time” (Lewin, 1951, p. 75). Precisely, “future orientation,” as a component of perceived time, is conceived as the “capacity to anticipate, clarify, and structure the future, including a cognitive elaboration of plans and projects and reflecting concern, involvement, and engagement in the future” (Gjesme, 1983, p. 452).

As the future is constructed at the representational level of cognitive functioning, a person’s beliefs about the future affect the present behavior (also perceptions and intentions) (Lewin, 1951; Nuttin & Lens, 1985; Bandura, 2006). However, this causal relationship is contingent on people’s perceptions of their future trajectories “as something fixed and determinate, or conversely, as something open and negotiable” (Emirbayer & Mische, 1998, p. 984). According to Nuttin and Lens (1985, p. 10), “the level of reality [the perceived degree of realism in a person’s future time perspective] regulates current behavior.” Thus, entrepreneurial intentions, as located in a future time representing a planned behavior, cannot be adequately studied unless individuals’ perceptions of their capacity to plan for the future are considered. To capture the projective element of agency, individuals’ beliefs about their capacity to engage in long-term planning are considered, comprising the future orientation construct in the investigation. This conception relates to the notion of “planful competence” (Clausen, 1991), indicating “an individual’s capacity for making (and sticking to) advantageous long-term plans” (Shanahan et al., 2003 cited in Hiltin & Elder, 2007, p. 182). It is also akin to “connectedness,” a cognitive aspect of future time perspective focusing on planning this future (Husman & Shell, 2008).

This study considers students as samples; therefore, in a transition period from education to employment, it seems reasonable to expect that the changes they face demand adjustments in their actions in response to emerging career decisions. Thus, projectivity is used as “it necessitates a constant search of ways to respond best to current situations considering prospects and goals” (Emirbayer & Mische, 1998, p. 999). Therefore, it is assumed that future orientation enhances the relationship between emancipation and entrepreneurial intention by strengthening the impact of perceived behavioral control and attitude on entrepreneurial intention.

This assumption is based on the following considerations. Considering that “beliefs concerning consequences of a behavior are viewed as determining attitudes toward the behavior” (Ajzen, 1991, p. 197), thinking positively about a distant future is likely to make positive attitudes toward an entrepreneurial activity more salient. Prior research investigating the effect of manipulated time perspective on attitude-intention consistency for planned behaviors, e.g., saving and environmental protection, has indicated that future orientation increases this consistency (Rabinovich et al., 2010). Likewise, perceived behavioral control correlates to future orientation as it is compatible with self-efficacy, which “is concerned with judgments of how well one can execute courses of action required to deal with prospective situations” (Bandura, 1982, p. 122). In addition, future-oriented individuals tend to perceive the meaningful relationship between current actions and future ambitions. Thus, the capacity to engage in long-term planning could initiate activities that increase individuals’ perceptions of their capacity to act entrepreneurially. Previous research has shown that time perspective enhances self-efficacy in career planning (Walker & Tracey, 2012), which is a precursor to job decision-making (Lent et al., 1994; Sachinidis et al., 2020). Furthermore, the way people distinguish their capacity for long-term planning, i.e., their future orientation, makes a difference to their career agency beliefs, i.e., their emancipating procedure; hence, the variation in entrepreneurial intention is better clarified.

In light of the discussion above, the agency is revealed as a constellation of aspects according to the conceptual area where it is exercised. Within this framework, this study aims to investigate how aspects of personal agency, namely, emancipation and future orientation, relate to individuals’ intention to follow an entrepreneurial career. Based on these considerations, the following hypotheses are formed:

*H1: Emancipation (EMAN) positively and indirectly affects students’ entrepreneurial intention (EI) mediated by (a) personal attitude (PA) and (b) perceived behavioral control (PBC).*



H2: *The indirect effect of emancipation (EMAN) on entrepreneurial intention (EI) via personal attitude (PA) and perceived behavioral control (PBC) varies across levels of future orientation (FO).*

## 2. METHODOLOGY

A modified form of the planned behavior model (Ajzen, 1991) was used to unfold the agency construct concerning entrepreneurial intention formation. Accordingly, the paper used a quantitative approach and a survey strategy, as well as a mediation analysis to identify the correlations between emancipation and entrepreneurial intentions. In addition, the main proximal antecedents of intention (entrepreneurial attitude and perceived behavioral control) were chosen as mediating variables. Finally, moderated mediation analysis showed whether the mediated influence of emancipation on entrepreneurial intention is conditional on future orientation.

The study population comprised fourth-year business students at a public university in Greece. Table 1 shows the population distribution by department: Accounting and Finance, Business Administration, and Tourism Management. Interest was oriented to fourth-year students since they are more likely to consider career options. They were estimated as 25% of the total number of students in three departments. Thus, the estimation of population was  $0.25 \cdot 12,703 = 3,175.75 \sim 3,176$ .

**Table 1.** Distribution of student population by department

Department	Number of Students
Accounting and Finance	3,980
Business Administration	5,711
Tourism Management	3,012
Total	12,703

Concerning the sampling procedure, the cluster method was employed using selected courses of the fourth-year curricula as clusters. The data were collected through questionnaires sent via email by the Secretariat of the Departments to students attending the selected courses (clusters). In all, 537 students replied to the email, consented to the study, and provided responses to the survey.

To estimate sample size adequacy, Eng's (2003) sample size formula was used (Chalikias et al., 2021) expressed by:

$$n = \frac{(z_{\alpha/2})^2 \cdot p(1-p)}{e^2}, \quad (1)$$

where  $n$  is the required sample size,  $z_{\alpha/2}$  is the standard deviation corresponding to a significance level ( $\alpha = 5\%$ ),  $e$  is the accepted error (5%), and  $p$  is the estimate of the proportion to be measured. Gender was used as the proportional variable, and the pivotal estimation was 0.59 female and 0.41 male students. The calculation of the appropriate sample size is presented by:

$$n = \frac{(1.96)^2 \cdot 0.59 \cdot 0.41}{0.05^2} = 371.71 \sim 372. \quad (2)$$

Thus, the sample size ( $n = 537$ ) exceeds the necessary required to yield valid results. Among the respondents, the average age was 22.42 (SD = 9.88), 35.6% were males, and 64.4 were females. The vast majority of the participants were of Greek origin (94.8), while a significantly large number (82.9) came from an urban area (> 10,000). Regarding family financial status, more than half of the respondents (56.8) reported annual household income between 0 and 20,000 euros. At the same time, a small proportion (10.8) belonged to a family whose annual income was higher than 40,000 euros. Concerning parental occupational status, a substantially small number of respondents had a parent or mother being an entrepreneur (9.1 and 4.8, respectively). A higher proportion had a father (25.9) or a mother (11.5) self-employed.

Self-report measures were used to analyze all the variables employing multi-item scales as they “clearly outperform single items in terms of predictive validity” (Diamantopoulos et al., 2012, p. 434). Thus, students showed their opinions on the statements in the questionnaire through a seven-point Likert scale that ranged from 1 (Strongly disagree) to 7 (Strongly agree). Brislin's (1970) back-translation procedure was used; thus, all statements were translated into Greek. A number of items was chosen under established scale development practices (Kyriazos & Stalikas, 2018).

Convergent validity was assessed using factor analysis. The Kaiser-Meyer-Olkin (KMO) test for sampling adequacy (with values ranging from 0.626 to 0.890) and Bartlett's sphericity test ( $p < 0.001$ ) qualified scales for factor analysis (Hair et al., 2010). Varimax rotation showed that all items for each explanatory variable were loaded on a single factor with eigenvalues exceeding 1.0. Thus, all factor loadings were significant (Hair et al., 2010), ranging from 0.68 to 0.92. Cronbach's alpha was used to test reliability and internal consistency. All latent variables exceeded the conventional threshold level of 0.65 for newly developed measures in social science research (Spector, 1992), ranging from 0.66 to 0.92, suggesting reliability for the construct measures.

Entrepreneurial intention was measured with three items assessing intention: "My professional goal is to become an entrepreneur," "I am determined to create a firm in the future," and "I will make every effort to start and run my own firm" (Liñán & Chen, 2009). Two items indicated gestation activities: "I spend time learning about starting a firm" and "I search for business start-up opportunities" (Thompson, 2009) (Cronbach's  $\alpha = 0.92$ ; proportion of variance: 77.15).

Personal attitude used a five-item scale by Liñán and Chen (2009). Four items reflect affective attitude: "Being an entrepreneur would entail great satisfaction for me," "A career as an entrepreneur is attractive for me," "If I had the opportunity and resources, I would like to start a firm," and "Among various career options, I would rather be an entrepreneur." Moreover, one item reflects an evaluative attitude: "Being an entrepreneur implies more advantages than disadvantages to me" (Cronbach's  $\alpha = 0.90$ ; proportion of variance: 72.46).

Perceived behavioral control employed three items reflecting self-efficacy: "I have the skills and competencies to succeed as an entrepreneur" (Autio et al., 2001), "I am prepared to start a viable firm" (Liñán & Chen, 2009), "Starting a business venture would be the best way to make good use of the knowledge gained from my studies" (developed for this paper). In addition, three items reflected control over the behavior: "I can control the uncertainty and the risks emerging from unfore-

seen circumstances," "I can control the creation process of a new firm" (Liñán & Chen, 2009), and "The number of events outside my control which could prevent me from being an entrepreneur is very few" (Kolvereid, 1996) (Cronbach's  $\alpha = 0.88$ ; proportion of variance: 62.31).

Emancipation was assessed with four items: "I alone will determine my professional future," "I can plan my professional career," "I can make decisions on all the important issues that concern me," and "If I fail professionally, it is entirely my fault" (Cronbach's  $\alpha = 0.77$ ; proportion of variance: 47.56).

Future orientation was measured with three items: "It is useless to make long-term plans. Things change fast," "I usually make plans for the future," and "I can set long-term goals" (Cronbach's  $\alpha = 0.66$ ; proportion of variance: 61.24).

The mediation effects were analyzed with the PROCESS macro model 4, while the moderated mediation effects employed model 14 as developed by Hayes (2013). The bootstrap method was used to calculate the 95% confidence intervals (CIs) of the indirect effect. A significant indirect effect is indicated when the 95% CI of an indirect effect does not span zero and  $p = \leq 0.05$  (Hayes, 2013). Linear regression analyses examined whether the required conditions for mediation and moderated mediation analyses were met (Hayes, 2013). Research variables were assessed using descriptive statistics. Pearson's correlation analysis was most suitable for continuously scaled items (Martin & Bridgmon, 2012).

### 3. RESULTS

The study results are presented by way of descriptive statistics, mediation effects, and moderated mediation effects.

Table 2 shows standard deviations, means, and bivariate correlations across the selected variables. The findings showed no multicollinearity in the data (Hair et al., 2010). Regarding the data normality, the Kolmogorov-Smirnov (K-S) test and descriptive measures of kurtosis and skewness were used. In all cases, the K-S hypothesis of nor-

**Table 2.** Means, standard deviations, and intercorrelations among variables

Variable	Mean	SD	1	2	3	4
Personal Attitude (PA)	5.233	1.232	–	–	–	–
Perceived Behavioral Control (PBC)	4.135	1.202	0.577***	–	–	–
Emancipation (EMAN)	5.296	1.119	0.304***	0.347***	–	–
Future Orientation (FO)	4.832	1.200	0.280***	0.321***	0.293***	–
Entrepreneurial Intention (EI)	4.502	1.602	0.760***	0.645***	0.320***	0.302***

Note: n = 537, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001 (two-tailed tests).

mal distribution was not rejected, while skewness and kurtosis values fell in the range between -2 to 2, -7 to 7, respectively (Hair et al., 2010). Therefore, the normality assumption is satisfied.

Considering H1 (personal attitude (PA) and perceived behavioral control (PBC) mediate the relationship between emancipation (EMAN) and entrepreneurial intention (EI)), the procedure for estimating this indirect effect involves regression models to test for direct causal effects of the predictor on the moderators, as well as the effect of both the predictor and the moderators on the outcome variable. Regression analyses results (Table 3) show that emancipation explained a significant proportion of the variance in personal attitude,  $R^2 = 0.093$ ,  $p < 0.001$ , and significantly predicted personal attitude,  $B = 0.381$ ,  $t = 7.393$ ,  $p < 0.001$ , while the CI (0.280-0.483) is different from zero. In addition, emancipation explained

a significant proportion of the variance in perceived behavioral control,  $R^2 = 0.126$ ,  $p < 0.001$ , and significantly predicted perceived behavioral control,  $B = 0.433$ ,  $t = 8.772$ ,  $p < 0.001$ , while the CI (0.336, 0.530) is different from zero.

Simultaneous regression analysis of predictors of entrepreneurial intention indicated that personal attitude is a significant positive predictor of entrepreneurial intention,  $B = 0.747$ ,  $t = 17.970$ ,  $p < 0.001$ , while CI (0.665-0.829) is different from zero. Likewise, perceived behavioral control is a significant positive predictor of entrepreneurial intention,  $B = 0.396$ ,  $t = 9.112$ ,  $p < 0.001$ , while the CI (0.310 to 0.481) does not include zero. The predictive effect of attitude toward entrepreneurship and perceived behavioral control over the behavior validate the assumptions of the theory of planned behavior (Ajzen, 1991).

**Table 3.** Regression results for the mediation effects

Outcome: PA						
Model 1 Summary						
R	R <sup>2</sup>	MSE	F	Df1	df2	p
0.304	0.093	1.381	54.649	1.000	535.000	<0.001
	B	se	t	p	LLCI	ULCI
constant	3.304	0.266	12.426	<0.001	2.781	3.826
EMAN	0.381	0.052	7.393	<0.001	0.280	0.483
Outcome: PBC						
Model 2 Summary						
R	R <sup>2</sup>	MSE	F	Df1	df2	p
0.355	0.126	1.266	76.95	1.000	535.000	<0.001
	B	se	t	p	LLCI	ULCI
constant	1.943	0.255	7.634	<0.001	1.443	2.443
EMAN	0.433	0.049	8.772	<0.001	0.336	0.530
Outcome: EI						
Model 3 Summary						
R	R <sup>2</sup>	MSE	F	Df1	df2	p
0.802	0.643	0.922	319.898	3.000	533.000	<0.001
	B	se	t	p	LLCI	ULCI
constant	-1.424	0.247	-5.767	<0.001	-1.909	-0.939
EMAN	0.075	0.046	1.660	0.098	-0.014	0.165
PA	0.747	0.042	17.970	<0.001	0.665	0.829
PBC	0.396	0.043	9.112	<0.001	0.310	0.481



In contrast, emancipation was not a significant predictor of entrepreneurial intention, as  $B = 0.075$ ,  $t = 1.660$ ,  $p = 0.098$ , while CI (-0.014 to 0.165) crosses zero. The regression model is statistically significant,  $R^2 = 0.643$ ,  $p < 0.001$ . According to Preacher and Hayes (2004 cited in Zhao et al., 2010), the significance of the indirect effects should be estimated and bootstrapped to check the mediation between predictors, mediators, and outcome variables. Table 4 shows that emancipation indirectly and significantly affects entrepreneurial intention; the Boot CI range differs from zero. The influences of emancipation through personal attitude, Effect = 0.285, 95% CI = 0.196 to 0.379 different from zero, and perceived behavioral control, Effect = 0.171, 95% CI = 0.116 to 0.234 different from zero, were statistically significant.

**Table 4.** Indirect effect of emancipation on entrepreneurial intention

Variable	Effect	BootSE	BootLLCI	BootULCI
TOTAL	0.456	0.058	0.344	0.569
PA	0.285	0.046	0.196	0.379
PBC	0.171	0.030	0.116	0.235

These results suggest that personal attitude and perceived behavioral control were mediators in the relationship between emancipation and entrepreneurial intention, with the attitude variable carrying a much more significant effect. Therefore, H1 was supported.

H2 claimed the indirect effect of emancipation (EMAN) on entrepreneurial intention (EI) depending on future orientation (FO). Thus, the study tries to find evidence that at least one of the paths in the mediation process is affected by the moderating variable to prove this hypothesis (Preacher et al., 2007). In the second stage, moderation is assumed, in which

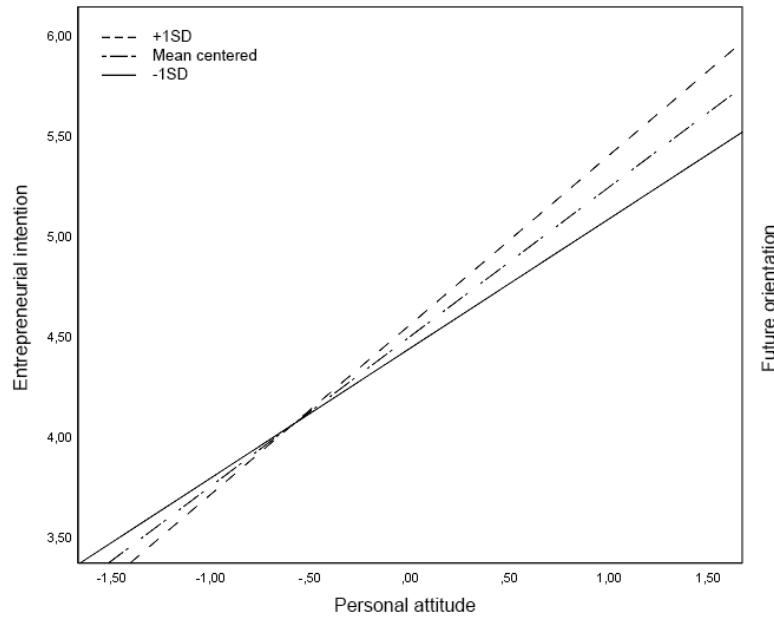
future orientation operates on the second path of the mediation process. Attitude and perceived behavioral control have varying effects on entrepreneurial intention across levels of temporal orientation. The regression model, in which emancipation (EMAN), personal attitude (PA), perceived control (PBC), future orientation (FO), along with the interaction effects between FO and PA (interaction 1) as well as between FO and PBC (interaction 2) act as predictors of entrepreneurial intention (EI), was statistically significant,  $R^2 = 0.648$ ,  $p < 0.001$ . Table 5 shows that perceived behavioral control and personal attitude positively affect entrepreneurial intention. However, only the interaction between future orientation and personal attitude was statistically significant,  $B = 0.083$ ,  $p = 0.012$ , while CI (0.019 to 0.148) is different from zero.

The bootstrapping technique checked whether the influence of emancipation on entrepreneurial intention was significant and conditionally indirect (Hayes, 2013). This relationship was analyzed by calculating simple slopes at  $\pm 1$  standard deviation of future orientation (Figure 1). The indirect effect of emancipation on entrepreneurial intention via the attitude mediator for a mean-centered future orientation was 0.285. In contrast, for  $-1SD$  this effect decreased to 0.247, and for  $+1SD$ , it increased to 0.323, CI (0.007 to 0.061) being different from zero (Table 6).

The pattern of results suggests that emancipation indirectly affects entrepreneurial intention. This link depends on students' future orientation: the higher the levels of future orientation, the higher the effect of personal attitude on entrepreneurial intention. Therefore, H2 was partially confirmed. Figure 2 presents the final empirically validated model.

**Table 5.** Regression results for the moderation effects

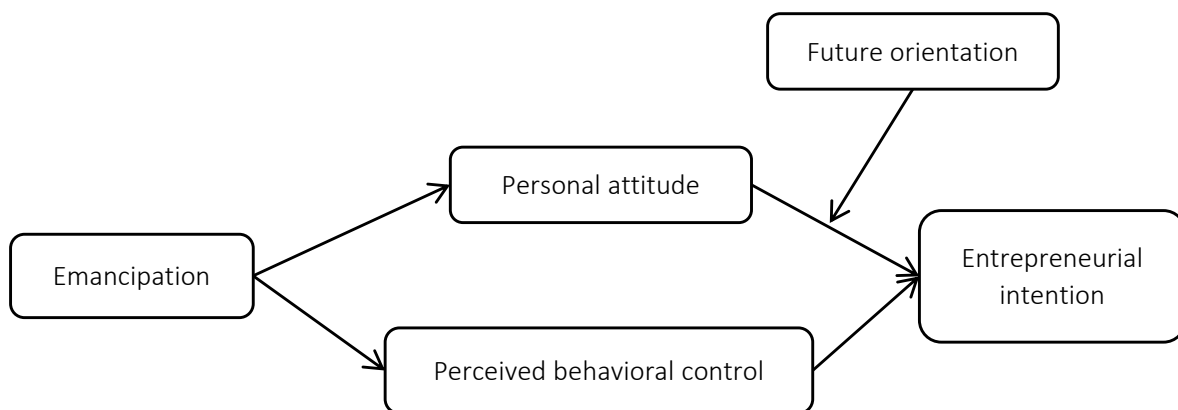
Output: EI						
Model Summary						
R	R <sup>2</sup>	MSE	F	Df1	df2	p
0.805	0.648	0.913	162.896	6.000	53.000	<0.001
	coeff	se	t	p	LLCI	ULCI
constant	4.163	0.239	17.436	<0.001	3.694	4.632
EMAN	0.065	0.046	1.408	0.160	-0.026	0.156
PA	0.747	0.042	17.958	<0.001	0.665	0.829
PBC	0.383	0.044	8.741	<0.001	0.297	0.469
FO	0.049	0.038	1.294	0.196	-0.026	0.124
FO*PA (Int_1)	0.083	0.033	2.526	0.012	0.019	0.148
FO*PBC (Int_2)	-0.056	0.034	-1.652	0.099	-0.124	0.011



**Figure 1.** Relationship between personal attitude and entrepreneurial intentions for different levels of future orientation

**Table 6.** Moderation effect of future orientation in the emancipation- entrepreneurial intention relationship (via attitude)

FO	Effect	BootSE	BootLLCI	BootULCI
-1 SD (-1.200)	0.247	0.042	0.166	0.333
0.000	0.285	0.046	0.196	0.379
+1 SD (1.200)	0.323	0.055	0.219	0.435
Index of moderated mediation				
	Index	BootSE	BootLLCI	BootULCI
FO	0.032	0.014	0.007	0.061



**Figure 2.** Final validated model

## 4. DISCUSSION

To examine individuals' perceptions of agency in relation to entrepreneurial intention formation, this study proposed a conceptual model of com-

plex, non-linear relationships, as suggested by Krueger (2009) and Fayolle and Liñán (2014).

Mediation analysis has shown that attitude, rather than perceived behavioral control, is more signifi-

cant in explaining the effects of emancipation on entrepreneurial intention. Therefore, it is suggested that students who score highly on emancipation orient their entrepreneurial intention regarding their idiosyncratic attitudes and beliefs.

As regards the moderating role of future orientation, statistical analysis has indicated that only the effect of attitude on intention is specified to enhance across higher levels of future orientation. The significance of this effect can be attributed to the motivational strength of future orientation (Nuttin & Lens, 1985; Husman & Shell, 2008) to foster positive attitudes toward an entrepreneurial goal and so influence, in turn, further intention development. In fact, the results reiterate Allport's (1935, p. 810) appraisal of attitudes as "the most distinctive and indispensable concept in social psychology." The construct was the more vital mediator in explaining the emancipation effect on entrepreneurial intention. In addition, it was a variable causing the interaction with future orientation, enhancing thus entrepreneurial intention development.

Perceived behavioral control was a weaker predictor of intention, with a more negligible mediating effect on the emancipation-entrepreneurial intention relationship and a non-significant interaction effect with future orientation. Business students' lower efficacy beliefs could be attributed to the fact that, owing to their studies, they are better informed of business systems and financial risks; thus, they avoid overestimating their capacities.

The role of future orientation as a regulator in the emancipation-entrepreneurial intention relationship was less significant than expected. This can be ascribed to methodological issues, i.e., measurement factors or the nature of moderators as explaining better "a weak or inconsistent relation between a predictor and a criterion variable" (Baron & Kenny, 1986, p. 1178). From a sociological perspective, though, it could be explained by the perception of time in contemporary fast-changing societies, that is, the present conditions' predominance makes the future ambiguous and difficult to predict and plan.

Previous research examined agency-related concepts in various configurations as intention antecedents and provided evidence accounting for

additional variance in entrepreneurial intention. Namely, self-identity (Conner & Armitage, 1998), self-regulation (Pihie & Bagheri, 2013) and proactivity (Zampetakis, 2008). What is theoretically innovative is the attempt to explain the emergence of entrepreneurial intention in terms of the interplay of temporal context and agency. In this way, the paper responds to calls for greater attention to time and temporality issues in entrepreneurship research and for integrating theoretical insights from other disciplines so as to enhance understanding in the field (Bird, 1988; Fletcher & Selden, 2016).

The results instigate pedagogical implications, especially when public policy is highly concerned with entrepreneurship development. Given that cognitive processes associated with entrepreneurial thinking and action can be influenced through education, it is evident that an educational turn toward entrepreneurial cognition would advance the knowledge of the instrumental factors required to foster an individual's entrepreneurial behavior. Considering individuals' perceptions of their capacity to exert control over their career and to plan for the future have a significant impact on their entrepreneurial intention by construing a positive attitude toward entrepreneurship, triggering favorable attitudes can be regarded as an effective means to augment entrepreneurial intention and behavior. Thus, attitudes are subject to change through "the individual's interactions with communicators, social networks, and social media" (Albarracin & Shavitt, 2018, p. 320).

Education is seen as the means to sustain and develop young individuals' capacities for agentic and autonomous action, especially in present-day conditions when societal development toward individualization has rendered agency a necessary property requiring individuals to take control over their lives. In that, there seems to be a gap, as Bauman (2000) claims, "between the right of self-assertion and the capacity to control the social settings which render such self-assertion feasible or unrealistic" (p. 38). If such a claim is sustainable, it is a matter of concern for education policies and needs to be addressed.

Emancipation and future orientation were discussed as the most relevant concepts concerning entrepreneurial intention formation in a sample

of young people. By focusing on temporal agency, the focus was on individuals' subjective beliefs of their capacity to exercise agency rather than on the role of social influences or structural resources in shaping one's agentic capacities. Future research might explore how the duality of agency and structure influences the emergence of entre-

preneurial intention. Also, considering that "the effect of intention strength on behavior weakens for individuals who display a weak sense of agency" (Koutsogianni et al., 2021, p. 199), longitudinal research that examines temporal agency in relation to actual entrepreneurial behavior is an important area.

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## CONCLUSION

This paper investigated the underlying mechanisms through which aspects of personal agency influence the formation of entrepreneurial intention considering business students as a target population. The results indicated that students' perceptions of agentic capacities significantly enhance their entrepreneurial intentions. Furthermore, students' perceptions of emancipation were shown to indirectly influence their intention to engage in entrepreneurial behavior by affecting personal attitudes and perceived behavioral control over the behavior. Thus, the theory of planned behavior as a framework for explaining entrepreneurship intention and behavior is validated.

The findings also revealed that students' future orientation enhances the effect of emancipation on entrepreneurial intention by strengthening the positive relationship between attitudes and entrepreneurial intention. Summarizing the results, a positive attitude toward entrepreneurship appeared to be the strongest determinant of entrepreneurial intention. Furthermore, the weak regulatory role of future orientation implies a predominantly present-oriented agency for the students who exhibit entrepreneurial intention. In fact, present-oriented agency, indicted in the emancipation construct, appeared to be most relevant to entrepreneurial intention formation.

Overall, these findings support the idea that education policies oriented to the promotion of an entrepreneurship career should consider, among their components, the cultivation and activation of students' agentic capacities.

## AUTHOR CONTRIBUTIONS

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