

Affective, normative and continuance commitments of nascent entrepreneurs: an empirical test.

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Résumé :

Si les modèles d'intention entrepreneuriale ont été au cœur d'un courant prolifique de recherche sur les tenants motivationnels du comportement entrepreneurial, la manière dont ils y conduisent a jusqu'à présent relativement peu été étudiée. Notre étude propose une entrée dans cette « boîte noire », en testant un modèle intégrant le concept d'engagement dans la relation entre l'intention et le comportement entrepreneurial. En mobilisant le modèle tridimensionnel de l'engagement de Meyer et Allen sur une population d'entrepreneurs naissants, nous avons tenté de comprendre ce qui pouvait les lier à leur projet de création d'entreprise, ainsi qu'au projet plus général de devenir entrepreneur, et si cela pouvait expliquer qu'ils y investissent leurs ressources personnelles. Nos résultats révèlent que les engagements affectifs et de continuité affectent positivement le comportement entrepreneurial et met en lumière trois profils d'engagement rencontrés chez les entrepreneurs naissants. Ils contribuent ainsi à éclairer la dimension psychologique du passage à l'acte entrepreneurial.

Mots-clés : intention entrepreneuriale, processus entrepreneurial, commitment, engagement, entrepreneuriat naissant

INTRODUCTION

Since the late 1980s, intention models have been at the core of a whole stream of research in the Entrepreneurship fields (e.g. Bird, 1988, Kolvereid, 1996a, 1996b, Krueger, 1993), relying mainly on Ajzen's theory (1991) of planned behaviour (TPB) and Shapero and Sokol's Entrepreneurial Event Model (1982). Yet has progressively emerged a clear injunction for future researches to address the "intention-behaviour" gap (Fayolle and Liñán, 2014), in order to better understand entrepreneurial action (Krueger, 2009). Indeed, intention refers to a state of mind that direct attention, experience and action towards a specific goal (Bird, 1988). However, what leads individuals to take concrete steps in order to achieve this goal is still underresearched. Highlighting the "*urgent need*" to "*empirically and theoretically investigate the intention-behaviour link*", Fayolle and Liñán (2014) proposed the concept of commitment as an interesting direction for future researches, as it could help understanding what compels entrepreneurs towards a line of action. In line with recent researches on the adaptation of the three-commitment model on intended entrepreneurs (Adam and Fayolle, 2015; Adam and Fayolle, 2016), our study specifically focuses on the concept of commitment. Drawing on Allen and Meyer's (1990) three-component model, it addresses its role in the implementation of intention into entrepreneurial behaviour through an empirical study among nascent entrepreneurs.

Meyer and Allen (1987, 1990, 1991) worked extensively on the notion of commitment in the organizational context, which they defined as "*a psychological state reflecting employee's relationship to the organization*" (Allen and Meyer, 1990). Considering that commitment was a multi-dimensional construct, they developed a three-component model, distinguishing different mindsets labelled *affective commitment*, *continuance commitment* and *normative commitment*. They argued that an individual's maintenance within an organization could be better understood if all these three forms of commitment were considered together (Meyer and Allen, 1991). In order to study how commitment impacts behaviours, they develop scales to measure its three components. In turn, the three-dimensional model of commitment can be thus very useful to provide a better understanding of what ties an individual to a course of action, beyond his or her initial intentions. Meyer and Allen's model has been widely used in the fields of organizational psychology, leading to the development of robust measurements (Allen and Meyer, 1990; Meyer, Allen and Smith, 1993) but also to re-conceptualizations (Meyer and Hercovitch, 2001, Meyer, Becker and Vandenberghe, 2004, Meyer and Parfynova, 2010). We

propose to apply it to the entrepreneurial context to understand what ties nascent entrepreneurs to their intentions.

However, a mere replication of the three-components model to the entrepreneurial context is not without raising questions. Adam and Fayolle (2015), who suggested that commitment could be both a predictor and a moderator in the entrepreneurial intention-behaviour's relationship, underlined the need to adapt the scales developed by Meyer and Allen to entrepreneurship. Yet, to our knowledge, such an extensive adaptation has not so far been tested quantitatively on nascent entrepreneurs. Although few studies have attempted to import the three-component model in the context of entrepreneurship, they all eventually measured the link between an individual and an existing organization: the heirs with the family business (Dawson, Sharma et al, 2015), the franchisees towards their franchise organization (Mignonac, Vandenbergue and al, 2015) or entrepreneurs with the company they have been running for many years (Tasnim et al, 2016, Valéau, 2017). However, nascent entrepreneurs are defined as individuals trying to start an independent business (Reynolds, 1997), involved in "*a process of change, emergence and creation*" (Bruyat and Julien, 2001), and might experience differently these three forms of commitment. Moreover, entrepreneurial commitment could have two main *foci*: the entrepreneurial project and the entrepreneurial profession. However, some questions remained unanswered: what's the role of commitment in the implementation of intention into action? Can affective, normative and continuance commitment explain resources investment of nascent entrepreneurs? Are there profiles of commitment and what are their behavioural impacts?

To address these questions, we conducted a quantitative study among 139 nascent entrepreneurs who benefit from the French student entrepreneur status (SNEE), granted to all students developing early-stage entrepreneurial projects in the context of French higher education. We relied on Meyer, Allen and Smith (1993)'s six-factors solutions and Meyer and Hercovitch (2001)'s propositions, but also on Adam and Fayolle's (2015) and Valéau's (2017) models to build our scale.

We first present our theoretical framework, on which we built our main hypothesis, before describing the sample and methodology used to test them. We then present and discuss our results and future paths for research developments.

1. FROM INTENTION(S) TO ACTIONS: INTEGRATING COMMITMENT IN THE IMPLEMENTATION OF INTENTION INTO ENTREPRENEURIAL BEHAVIOUR.

In this section, we present existing conceptualizations of commitment and how this construct could bridge the intention-action gap.

1.1. THE IMPLEMENTATION OF INTENTION INTO ENTREPRENEURIAL BEHAVIOUR.

Since the 1980s, intention models have generated an impressive number of researches in the entrepreneurship field, relying mainly on Ajzen's (1991) theory of Planned Behaviour and Shapero and Sokol's Entrepreneurial Event Model (1982). In his adapted model of entrepreneurial intention, Krueger (1993) suggests that an individual intention to create a business would be formed if this individual has a positive perception of business creation (*perceived desirability*) - that can be related to the social pressure he feels from his environment (*subjective norm*) - and of his capacities to undertake such a project (*perceived feasibility*). The intention model in entrepreneurship has proved its robustness through multiple empirical studies (Krueger and Brazeal, 1994, Krueger and Casrud, 1993, Krueger, Reilly and Casrud, 2000; Kautonen et al, 2013; Kautonen et al., 2015). As a result, it has been extensively used over the last twenty years, especially to better understand the belief systems underlying an individual's decision to create a new business (e.g. Davidsson, 1991; Krueger, 1993; Wiklund & Sheperd, 2000, Boissin, Chollet & Emin, 2009).

However, its predictive power has recently been questioned. Indeed, many studies have pointed out the unsystematic link between entrepreneurial intention and behaviour. In 1987, Ajzen already admitted that that only 30% of the variance in behaviour could be explained by intentions. More recently, a meta-analysis conducted by Schaegel and Koenig (2014) showed that only 37% of entrepreneurial behaviour could be explained by entrepreneurial intentions. Moreau and Raveleau (2006) have also shown that the translation of intention to action is not a linear process: the intensity of intention can evolve over time and does not systematically lead to business creation. Some studies try to bridge this gap (Carsrud and Brännback, 2011; Adam and Fayolle, 2016) but as many researchers pointed out (Fayolle and Liñán, 2014; Adam and Fayolle, 2015, Adam and Fayolle, 2016), the volitional part of the entrepreneurial process, where intentions are translated into actual behaviour, is still under researched.

1.2. COMMITMENT: A RELEVANT CONSTRUCT TO UNDERSTAND THE ENTREPRENEURIAL PROCESS.

Highlighting the “*urgent need*” to “*empirically and theoretically investigate the intention-behaviour link*” (Fayolle and Liñán, 2014), researchers have called for an integration of the concept of commitment to better understand the entrepreneurial process.

1.2.1. The concept of commitment: accounting for consistent lines of activity

The concept of commitment finds its roots in both sociological and psychological studies, which fed each other since the fifties. The first sociological studies on commitment focused mainly on the link between individuals and organizations, for instance political parties (Howe and Coser, 1957). According to Becker (1960), who was one of the first to propose a theoretical framework for the notion, their common point is to use commitment when trying to account for “*consistent lines of activities*” or what he calls “*consistency*”. Particularly, he used the notion to analyze deviant careers and to understand why some people choose to get involved in deviant behaviours while other don’t (Becker, 1985). To him, consistency can be defined through 3 main characteristics: (1) it persists over some period of time, (2) it can involve a diversity of activities which have in commons the pursuit of the same goal and (3) it implies the choice by the actor of the best alternatives among feasible ones towards his or her goal (Becker, 1960). Moreover, he clearly differentiates the fact of “*being committed*” – which refers to a state, a mindset - from “*the acts of commitment*”, “*the behaviour commitment will serve to explain*” – which refers to the consistent line of action resulting from this state of commitment. These two distinct dimensions have also been labelled attitudinal and behavioural commitment (Mowday, Porter et Steers, 1982; Allen et Meyer, 1990).

Indeed, he proposes the notion of *side-bets*, through which the actor ties to his action other interests of his or her, “*originally unrelated to his present line of action*”. In other words, prior actions of an individual constraint his or her future actions in a line of activity, because inconsistency would “*be so expensive that it’s no longer a feasible alternative*”. A central element of commitment is the awareness of the actor that he actually made these side bets and that “*his decision in this case will have ramifications beyond it*”. In that, his definition of commitment is in line with the first definitions proposed in psychology, defining it as what “*links the individual to his behaviours*” (Kiesler and Sakumura, 1966). Commitment is thus defined as a stabilizing force that gives direction to behaviour and compels an individual to a course of action. In that, it can be very useful to provide a better understanding of what ties an individual to a his or her behaviours, beyond his or her initial intentions. As entrepreneurship is a long process that requires perseverance over time, commitment is a factor worth studying to understand the link between entrepreneurial intention and behaviour.

1.2.1. The three-components of commitment: a model from organizational studies

Meyer and Hercovitch (2001), who studied mainly the link between an individual and its work environment, argues that this binding force was experienced as a *mind-set* (a frame of mind or psychological state). They tried to specify the nature of this force, considering that it was essentially multidimensional, building on Meyer's previous works on the topic.

Indeed, Meyer and Allen (1991) developed a three-component model of organizational commitment, distinguishing different mindsets they labeled *affective commitment*, *continuance commitment* and *normative commitment*. They argued that a relationship with an organization can be better understood if all three forms of commitment are considered together.

- Affective commitment refers to “*the employee's emotional attachment to, identification with and involvement in the organization*”. An employee with a strong affective commitment will stay in the organization mainly because he wants to stay (Allen et Meyer, 1990). This mindset is thus characterized by a *desire* to pursue a course of action (Meyer and Hercovitch, 2001).
- Continuance commitment derives from Becker's side bets theory as “*an awareness of the costs associated with leaving the organization*”. It refers to a mindset of *perceived costs*, that is to say the investments an individual has made working in a specific organization, that could be lost if he chooses to leave it. Some authors have suggested that continuance commitment could be split into two sub-dimensions: (a) the costs associated with inconsistency of behaviours and (b) the absence of perceived alternative of one's behaviour (McGee and Ford, 1987; Bentein, Vandenberghe and Dulac, 2004).
- Normative commitment is “*a feeling of obligation to continue employment*”, linked to moral considerations. Employees with a strong normative commitment stay in the organization because they ought to.

Individuals can be thus tied to organizations in multiple ways, which can have different effects on their effective behaviour within or towards the organization. Indeed, affective commitment is presumed to predict a larger number of positive behaviours, such as attendance, performance or organizational citizenship behaviour, than normative or continuance commitment (Meyer and Hercovitch, 2001). Moreover, the targets to which the individual become committed can be of diverse natures: organizational commitment can be related to the organization, but also to the team, the manager or, at a broader level, to the profession (Meyer and Allen, 1993). Meyer and Herscovitch (2001) suggested that there could exist different “*profiles of commitment*”, depending on the weight of each dimension of their model. Many empirical studies have confirmed that these different profiles might have distinct behavioural impacts (Meyer & Allen, 1991; Meyer, Stanley, Herscovitch & Topolnytsky, 2002).

1.3. THE THREE-COMPONENT MODEL OF COMMITMENT: THE MISSING LINK BETWEEN ENTREPRENEURIAL INTENTION AND ACTION?

Previous researches have contributed to the importation of the concept of commitment in the entrepreneurship fields, mainly to explain the intention to stay entrepreneur. Dawson et al (2015) have validated the links between affective and normative commitment and the intention for heirs to stay in the family business. Mignonac et al (2015) have shown the effects of affective and continuance commitment on franchisees's intention to stay with their franchise organization. More recently, Valeau (2017)'s study has confirmed that Meyer and Allen's occupation commitment model could be applied to entrepreneurs. He also confirmed the predictive power of affective and continuance commitment on the intention to stay entrepreneur, while normative commitment appeared not to have a significant effect. In most of these studies, entrepreneurial intention is used as an outcome variable, considering its predictive power towards entrepreneurial behaviour. Recent works have suggested that Allen and Meyer's concept of commitment could act both as predictor and moderator in the relationship between intention and its implementation into action (Adam and Fayolle, 2015). Yet, none of these models has been tested quantitatively so far.

Moreover, to our best knowledge, none of these studies has been performed on representative samples of nascent entrepreneurs involved in the process of creating a new venture. While Mignonac et al (2015) and Dawson et al (2015) ended-up measuring the link between individuals and existing organizations, Tasnim et al (2016)'s study focused on successful entrepreneurs and Valéau's (2017) on business owners part of the MEDEF, running already established businesses. We suggest that commitment might be experienced differently for nascent entrepreneurs. We rely on Bruyat's work (1993) on the entrepreneurial process, which he defines as *"a process of change, emergence and creation: creation of new value, but also, and at the same time, change and creation for the individual"* (Bruyat and Julien, 2001). It results in the investment of personal resources for the individual, who is considered engaged in the process when he or she *"starts devoting most of his or her time, energy, and financial, intellectual, relational and emotional resources to his or her project."* (Fayolle et Lassas-Clerc, 2006; Fayolle and al, 2011). In turn, we argue that resources investment in the project could be a relevant indicator of an individual's involvement into an entrepreneurial process.

In continuity with previous works (Adam and Fayolle, 2016), we suggest that two main *focii* of entrepreneurial commitment would be worth exploring: the entrepreneurial project (Adam and

Fayolle, 2015) and entrepreneurship as an occupation (Valéau, 2017, Adam and Gabay-Mariani, under review). Indeed, the entrepreneurial process implies to follow two main courses of action: conducting an entrepreneurial project that would eventually lead to business creation and becoming an entrepreneur as a career path - these two behaviours can be intertwined

In line with these forgoing discussions, we generated and tested the following hypothesis:

H1: Nascent entrepreneurs' intention to start a business has a positive effect on resources investments in their project

H2: Nascent entrepreneurs' intention to start a business has a positive influence on affective commitment

H3: Nascent entrepreneurs' intention to start a business has a positive influence on normative commitment

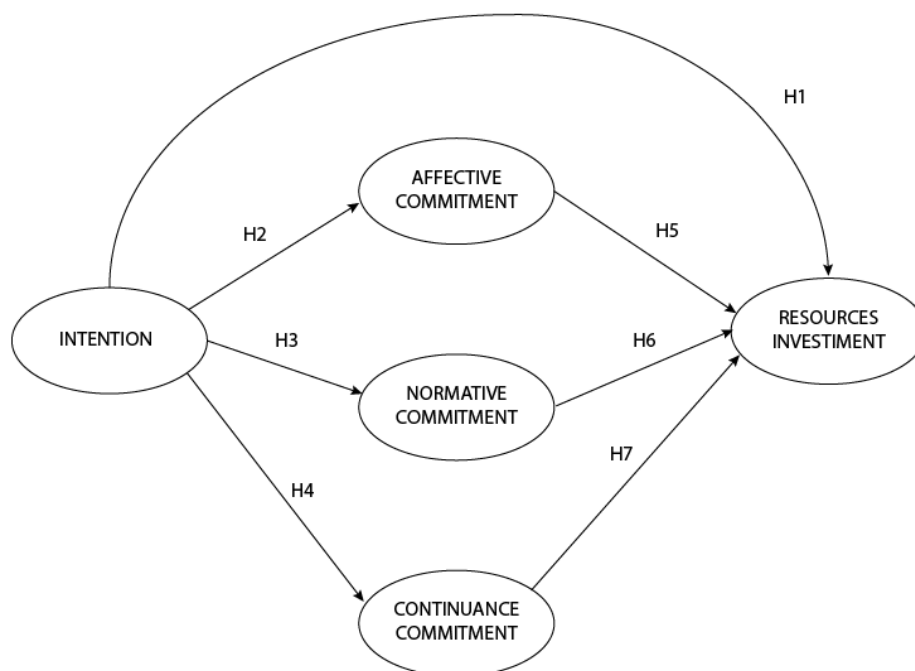
H4: Nascent entrepreneurs' intention to start a business has a positive influence on continuance commitment

H5: Nascent entrepreneurs' affective commitment has a positive effect on resources investment

H6: Nascent entrepreneurs' normative commitment has a positive effect on resources investment

H7: Nascent entrepreneurs' continuance commitment has a positive effect on resources investment

The following graphics sums up our research hypothesis and our tested models.

Figure 1 – Tested model

Furthermore, previous researches have suggested the existence of diverse profiles of commitment experienced by nascent entrepreneurs (Adam and Fayolle, 2016; Adam and Gabay-Mariani, under review). In turn, we hypothesized:

H8: There exist distinct profiles of nascent entrepreneurs according to the weight of each form of commitment experienced

H9: These profiles of commitment have distinct behavioural impacts on the entrepreneurial process

In the following section, we unfold the methodology used to test our working hypothesis.

2. METHODOLOGY: AN EMPIRICAL TEST ON NASCENT-ENTREPRENEURS

1.1.SAMPLE

To test our hypothesis, we conducted a quantitative study among nascent entrepreneurs who benefit from the French student entrepreneur status (SNEE)¹. This status is granted to all students and recent graduates conducting an entrepreneurial project in one of the 30 academic

¹ The SNEE is part of the the Program Students for Innovation, Transfer, and Entrepreneurship (PEPITE), implemented in France following the measures regarding entrepreneurship in Higher Education, announced in 2014 by French government. It is a pedagogical status, implying an enrollment to a higher education establishment, and can be renewed twice. In turn, young graduates can benefit from it and extend their student status one more year after graduation.

incubators parts of PEPITE, a national network implemented by French government, where they're trained and supported by both academic and professional tutors. In that, they represent an ideal sample of entrepreneurs already engaged in an entrepreneurial project. Using Survey Monkey's platform, we sent our survey to student-entrepreneurs part of Pépité France's data basis, among which we collected 384 replies. After excluded incomplete questionnaires, we kept 139 of them. Appendix 1 presents the main characteristics of our final sample.

Our final sample was mainly masculine (63,3%), aged between 21 and 24 years old. 28.8% of them were still students, while 72.1% were young graduates, at a Master level and above (72,7%). Only 28.8% of them had been previously exposed to entrepreneurship through their family. However, the two most represented study domains were Sciences, engineering and technology (39.7%) and Administration, management and business (20.1%), two educational fields that have been pioneers in France over the last ten years in the promotion and training of entrepreneurship. Only 5.8% of them declared pursuing their project out of necessity ("my constraints to find resources to live"), which is quite consistent with their study level and domains and the alternatives they would find in the job market. 54,1% of the projects were collective, with an average team size of 2 or 3 people (50.4% of the sample). Most of these nascent entrepreneurs were at the beginning of the entrepreneurial process: 42.4% of them had registered a legal entity for their project, and only a third of them generated revenues from it (among which only 24.1% declared being able to get a decent wage).

1.2.MEASURES

1.2.1. Dependent variable: personal resources investment

The first section of the questionnaire included items measuring our outcome variable, entrepreneurial behaviour through the resources invested by the nascent entrepreneurs for their project. Relying on Bruyat's definition on entrepreneurial involvement (1993), we chose to measure three main types of resources: time, financial and emotional resources. For each type of resource, we asked to quantify the amount of invested resources on a five-points scale (None – Few – Moderately – Most of them – All of them).

1.2.2. Independent variables: entrepreneurial intention

Entrepreneurial intention was measured with the items recommended by Kolvereid (1996). In line with previous research on students' entrepreneurial intention (Boissin and al, 2017), and as our sample was mainly composed of students and young graduates, we measure entrepreneurial

intention both in long and short term. Respondents were asked what was the probability that they'd become entrepreneur 'right after their studies' (short-term intention), 'one day in their professional life' (long-term intention).

1.2.3. Independent variables: the three components of commitment

The second section of the questionnaire contains items measuring commitment in the entrepreneurial context, based on Allen and Meyer's model (1990). We used Adam and Fayolle (2015)'s propositions to adapt it to the entrepreneurial project. We chose to extend our survey to another target, the entrepreneurial profession, as Meyer, Allen and Smith (1993) did in their extension of the three-component model of commitment to occupation. We relied mainly on their six-factor scales to build our questionnaire. To specify our questions and their focal behaviour (Meyer and Herscovitch, 2001), we relied on Kolvereid (1996)'s preference choice between entrepreneurship and wage-earning, as Valéau (2017) did in his scale of commitment to entrepreneurial profession. In total, our questionnaire was composed of 10 items for affective commitment, 9 items for continuance commitment and 6 items for continuance commitment. Among them, 14 were dedicated to the project and 11 to the profession. For each item, we used five-point Likert-type scale.

1.2.4. Descriptive variables

In order to characterize distinct groups of nascent entrepreneurs, the last section of the questionnaire measured descriptive variables related to the socio-demographic profile (age, gender, region, study level, study domain etc.) of the respondents and the nature of their project (registration, income, length of the project, size of the team, environmental/social mission, necessity/opportunity entrepreneurship). Relying on Bruyat's irreversibility threshold (1993), referring to the moment where it would be too costly for the entrepreneur to stop the entrepreneurial process - we also chose to measure risk perception. We used Fayolle, Barbosa and Kickul's (2008) four dimensions to write our items: financial, career, social and personal risk's perception. We asked our respondents to quantify the importance of the risk-taken on a five-point scale (From no risk to a very important risk).

1.3. ANALYSIS

Our analysis involved three main stages, aiming at verifying our research hypothesis:

OBJECTIVE	PROTOCOL
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Applying the three-component model of commitment to entrepreneurship	Confirmatory Factorial Analysis in XLSTAT.
Determining the role of commitment in the intention-behaviour relationship	We then tested our proposed model, using Path Least-Squares protocol in XLSTAT. The partial least-squares regression method, initially developed by Wold (1966), is a structural equation modelling which enables to test complex cause-effect relationship models with latent variables. Unlinked covariance-based approaches, it does not fit a common factor model to the data but a composite model, maximizing the amount of variance explained.
Identifying groups of nascent entrepreneurs according to their commitment profiles	Finally, we run a k-means clustering analysis in SPSS to highlight commitment profiles. We then used ANOVA to characterize distinctions in the behavioural impacts of each profile.

Table 1. Steps of analysis

The following section presents the main results of our investigation.

2. RESULTS

2.1. CONSTRUCTS VALIDITY

We first evaluated the measurement quality of our model, conducting confirmatory factor analyses in XLSTAT. All of them revealed satisfactory in terms of reliability (composite reliability $> .75$; Cronbach alpha $> .7$), dimensionality (% of shared variance $> .5$), convergent validity (cross loadings $> .5$) and discriminant validity (AVE $>$ squared correlations between latent variables). Intention (Rho of DG = .9; $\alpha = .76$; % of shared variance : .8) and Resources investment (Rho of DG = .9; $\alpha = .84$; % of shared variance = .7) were both first order factors, respectively composed by short term and long term intention and by money, time and emotional resources investment. Affective (Rho of DG = .9; $\alpha = .86$; % of shared variance = .72) normative (Rho of DG = .9; $\alpha = .86$; % of shared variance = .72) and continuance commitment (Rho of DG = .81; $\alpha = .73$; % of shared variance = .8) were second-order factors, composed by both affective, normative and continuance commitment to the two *foci* investigated in this research: the entrepreneurial project and entrepreneurship as an occupation. Appendix 2 presents the main indicators of measurement quality of our variables, as well as the items used to measure them.

2.2. HYPOTHESIS TESTING: GENERAL MODEL

The results reveal the role of commitment in the relationship between intention into resources investments. Means, standards deviations and correlations are reported in the following table.

Table 1. Means, SD and correlations of the variables

Variable	Mean	SD	1	2	3	4	5
1. Entrepreneurial Intention	4.2	1	1				
2. Affective Commitment	4.2	.6	,484**	1			
3. Continuance Commitment	2.4	.9	,472**	,446**	1		
4. Normative Commitment	3.4	.8	,368**	,534**	,480**	1	
5. Resources investements	3.7	.9	,639**	,422**	,401**	,299**	1

*Note. Means, standard deviations, and correlations were calculated for $n = 139$. Individual level analysis. Pearson correlation * $p < .05$; ** $p < .01$*

To test the structural equation model presented in Fig. 1, we used XLSTAT. Fig. 2 presented the results. It only includes the significant paths ($p < .05$) between our tested variables. The initial test of the global validity of the model reveals satisfactory indicators (relative goodness of fit (GoF) = .82; Absolute GoF = .55). It is to be noted that our model explains 44% of the variance of entrepreneurial behaviour, of which resources investment is a manifestation.

Moreover, all the paths linking intention to the three forms of commitment were significant, supporting Hypothesis 2, 3 and 4. We also included a direct path from intention to resources investment, which revealed significant, supporting Hypothesis 1. However, not all the paths linking commitment to resources investment were significant. As Hypothesis 5 and 7 were supported, with a positive influence on both affective and continuance commitment on entrepreneurial behaviour, normative commitment was not significant in predicting it. We ran Sobel Tests to determine whether affective and continuance commitment could act as mediator on intention – behaviour's relationship. Only affective commitment's test was significant, revealing that intention was partially mediated by affective commitment.

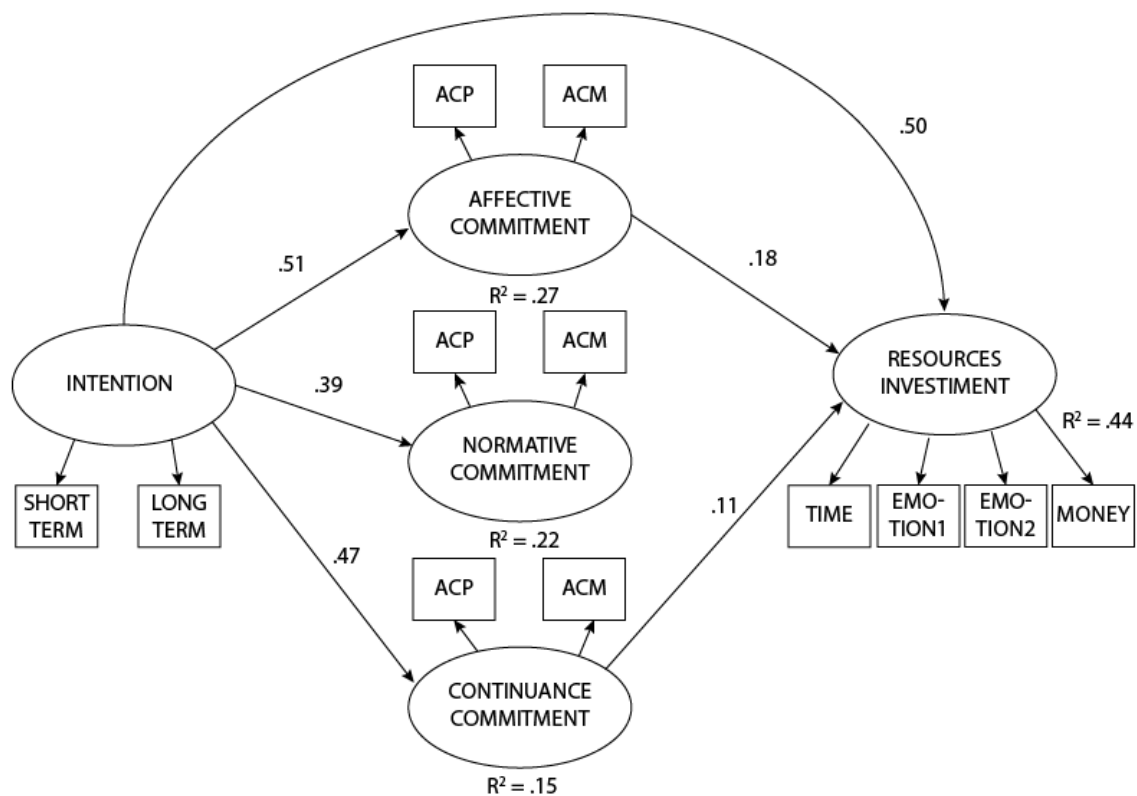


Figure 1. General model. Note. N = 139. All significant paths represented on the figure have a $p < .05$.

2.3. IDENTIFYING GROUPS OF NASCENT ENTREPRENEURS.

To identify homogeneous groups of nascent entrepreneurs, based on their commitment profiles, we ran k-means cluster analysis in SPSS, including affective, normative and continuance commitment. Three main groups were identified:

- The “weakly committed”: these entrepreneurs presented low levels of affective, continuance and normative commitments (22 observations)
- The “fully committed”: these individuals were strong on all of the three dimensions of commitment (49 observations)
- The “AC-NC dominant”: these individuals presented high levels of affective and normative commitments, but low levels of continuance commitment (68 observations).

Table 2 presents the results of the analysis.

Table 2. Results of K-means cluster analysis

	MEAN	MEDIAN	1 – WEAKLY COMMITTED	2 – FULLY COMMITTED	3 – AC-NC DOMINANT
Affective commitment	4.17	4.33	3,42	4,54	4,16
Continuance commitment	2.37	2.3	1,52	3,24	2,01
Normative commitment	3.4	3.5	2,24	4,00	3,35
Observation (n =)	139	139	22	68	49

Note. n = 139.

2.4.CHARACTERIZATION OF THE GROUPS: RESULTS OF ANOVA ANALYSIS

To determine whether our three groups had distinct behavioural impacts, we run ANOVA in SPSS. First, it is to be noted that none of the socio-demographic variables were significant in differentiating our groups. Moreover, only one project-related variable revealed significant: necessity entrepreneurship ($F(2,136) = 5.1$; $p = .008$), referring to the level of perceived constraints to find resources to live. However, ANOVA's tests were significant for resources investment ($F(2,136) = 9.7$; $p = .00$), risk-taking perception ($F(2,136) = 9.3$; $p = .00$), intention ($F(2, 136) = 18.4$; $p = .00$), as well as first-order factors such as long-term intention ($F(2, 136) = 18.5$; $p = .00$) and short-term intention ($F(2, 136) = 11.5$; $p = .00$).

We complemented these results by running Scheffé's tests, in order to identify differences and similitudes between our three groups. They were significantly different for necessity entrepreneurship, intention and short-term intention, with a gradation of level experienced from weakly committed to fully-committed individuals - AC-NC dominant profile standing as an intermediary level. Interestingly, there was no significant difference between strongly committed individuals and AC-NC dominant profile for resources investments (Scheffé, $p = .07$) and long-term intention (Scheffé, $p = .17$), which levels were both lower for weakly committed individuals. However, for risk-taking perception, there was no significant difference

between weakly committed individual and AC-NC dominants (Scheffé, $p = .35$), which level was higher for fully-committed entrepreneurs.

In the following sections, we discuss our results and how they could contribute to future research developments on the intention-action gap.

3. DISCUSSION

Our research establishes first interesting findings regarding the missing link between intention and action, by testing a model integrating three forms of commitment drawn from the work of Allen and Meyer (1990). Moreover, it differentiates profiles of entrepreneurs based on their commitment profiles and their behavioural distinctions. Our results show that affective and continuance commitment could actually play a role in the implementation of intention to become an entrepreneur into concrete steps performed towards this goal. In that, they are quite in line with organizational literature's findings, which consistently demonstrated that normative is unrelated or negatively related to discretionary performance in the organizational context (Meyer, Stanley and Parfyonova, 2012).

However, our cluster analysis revealed that the most represented group was both strongly affectively and normatively committed, questioning the actual role of normative commitment in the entrepreneurial process. This dimension of commitment has indeed been recently re-conceptualized, in the light of similar findings in the organizational context (Gellatly and al, 2006; Meyer and Parfyonova, 2010). Through a median split approach, Meyer and Herscovitch (2002) have for instance demonstrated that AC and NC dominant profiles were associated with higher levels of discretionary behaviour –that is implied by commitment but not necessarily specified within the terms of commitment (Meyer and Herscovitch, 2001). Similarly, Gellatly and al (2006) found that employees' profiles combining high level of normative and affective commitment reported greater intention to stay in their organization. In turn, they suggested that normative commitment had a “dual face” and was experienced differently according to the respective levels of affective and continuance commitment. Individuals strongly affectively committed would thus experience normative commitment as a “moral duty”, that is to say strong sense of desire to pursue a course of action because it's the right and moral thing to do. On the other hand, individuals with a strong continuance commitment would experience normative commitment as an indebted obligation, which refers to a sense of having to pursue a course of action to avoid the social costs of failing to do so. However, as underlined by Jaros (2007, 2017), the scales measuring normative commitment have not been revised yet.

Moreover, the original scale has been used extensively in research and served the development of measures of NC to other *foci*, including occupations (Meyer, Allen and Smith, 1993), supervisors and work teams (Stinglhamber, Bentein & Vandenberghe, 2004), customers and organizational changes initiatives (Meyer and Herscovitch, 2002). In turn, we suggest that the items dedicated to measure normative commitment should be primarily updated to adapt the model to entrepreneurship.

Another interesting finding highlighted by our research concerns the role of continuance commitment in the entrepreneurial process. Indeed, the fully committed individuals were both the ones with highest chances of perceiving risks taken for their entrepreneurial project and highest levels of necessity entrepreneurship (referring to the weight of financial constraints in the decision to pursue an entrepreneurial project). Bruyat (1993) considers the involvement of the individual fully completed when he or she reaches an irreversibility threshold. It corresponds to the moment where reversing the entrepreneurial process is no longer a feasible alternative and would be too costly for the individual. It echoes to Staw's (1981) theory of escalation of commitment, where individuals pursue a line of action in order to be consistent to be previous behaviours. Therefore, we suggest that continuance commitment could be a triggering factor of a deeper involvement of nascent entrepreneurs in their project, as a step where they engage their resources and put them at risk. It is also to be noted that only a third of our sample experienced continuance commitment at a high level. This could be explained by the characteristics of our sample, mainly composed by students and young graduates who could easily find an alternative in the job market and consider their entrepreneurial experience as a way to gain knowledge and skills useful for their professional life. Therefore, they might not experience the fact of pursuing their entrepreneurial project as a necessity. Further investigation could focus on samples of entrepreneurs who have less or don't have any alternative on the job market to determine if our results could be generalized.

Finally, our analysis involved second-order factors, combining two main *foci* defined as relevant in the entrepreneurial context: the project and the profession. However, it could be interesting to work with first order factors, in order to determine the contribution of commitment to each *foci* and if being committed to the project or to the profession has distinct behavioural impacts. Is the nascent entrepreneur pursuing his/her aspiration to become an entrepreneur or to advance a project of interest for her/him? Similarly, it could be interesting to distinguish short and long-term intentions in our model and to determine whether they lead to distinct commitment profiles. Indeed, Boissin and al (2017) have recently identified three submodels of entrepreneurial intention formation, according to the alternative long-term/short

term. Their findings suggest that although an individual may have the intention to become entrepreneur along his or her professional life, he won't necessarily involve in business creation in the near future. Further investigations could integrate this distinction and its impact on commitment and actual behaviour of nascent entrepreneurs.

4. CONCLUSION

4.1. CONTRIBUTIONS

This research established first interesting findings regarding nascent entrepreneur's commitment and its role on the volitional part of the entrepreneurial process. To our best knowledge, such an empirical test has never been performed before on large samples. Our results reveal a positive influence of affective and continuance commitment in the implementation of intention into entrepreneurial behaviour, studied through the level of resources invested by the entrepreneur. Moreover, we identified three main commitment profiles, revealing diverse thresholds of involvements in the project. Therefore, we believe that our work could pave the way for future researches attempting to fill the intention-behaviour gap.

4.2. IMPLICATIONS

Secondly, it could provide new insights on the entrepreneurial process of nascent entrepreneurs, especially student-entrepreneurs. The latter point is of interest for policy makers and practitioners concerned about business creation among students. Measuring profiles of entrepreneurial commitment could help conceiving an adapted training and support's offer for this population. From the vocational entrepreneur to the student experiencing entrepreneurship before going back to wage-earning, therefore maximizing his or her employability, paths of behaviour can vary across individuals. It is thus more than necessary to identify factors maintaining an entrepreneurial process through time.

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APPENDIX

Appendix 1. Sample description

Gender	
Male	63.3
Female	36.7
Nationality	
French	91.4
other	8.6
Age	
Under 21 years	15.1
21 to 23 years	47.5
24 years and older	37.4
Pedagogical status	
Student	28.8
Young graduate	71.2
Level of studies	
Baccalauréat level	2.9
Bachelor level (Bac + 1 to Bac +3)	24.5
Master level (Bac +4 to Bac +5)	69.1
Doctorate level	3.6
Study domains	
Arts, letters, languages or humanities	12.3
Law, economics or social sciences	10.1
Administration, management and business	20,1
Marketing, communication and advertising	6.5
Life sciences and health sciences	5.0
Sciences, engineering, technology	39.6
Other	5.8
At least one parent entrepreneur	
Yes	28.8
No	71.2
Collective project?	

Yes	64.7
Non	35.3
<i>Team size</i>	
Founder alone	28.1
Between 2 and 3 people	50.4
More than 3 people	21.5
<i>Registration?</i>	
Yes	42.4
No	57.6
<i>Generate revenue?</i>	
Yes	28.8
No	69.8
<i>Money investment?</i>	
No	7.2
Little money	15.8
Yes	76.9
<i>Descent wage?</i>	
Yes	24.1
No	75.9
<i>Necessity entrepreneurship?</i>	
Yes	24.4
No	75.6
<i>Opportunity entrepreneurship?</i>	
Yes	94.3
No	5.8
<i>Environmental or social mission?</i>	
Yes	60.1
No	39.9

Appendix 2. Results of confirmatory analyses of our variables

SECOND ORDER FACTOR	FIRST ORDER FACTOR	ITEMS	CROSS LOADINGS (1ST ORDER FACTORS)	CROSSLOADINGS (2ND ORDER FACTORS)	COMPOSITE RELIABILITY		CONVERGENT VALIDITY	DISCRIMINANT VALIDITY
					ALPHA OF CRONBACH	RHO OF DG	% OF SHARED VARIANCE	AVE > SQUARED CORRELATION
Intention	Short-term intention	What is the probability that you create your business at the end of your studies?		0,886	0,758	0,892	.8	yes
	Long-term intention	What is the probability that you create your business one day in your professional life?		0,907				
Affective commitment	Affective commitment (focus: projet)	My entrepreneurial project has a great deal of meaning to me	0,856	0,655	0,864	0,893	.72	yes
		My entrepreneurial project reflects my personal values	0,717	0,506				
		I would be happy to spend the rest of my career working on my entrepreneurial project	0,735	0,487				

	Affective commitment (<i>focus: profession</i>)	I am proud to be an entrepreneur	0,864	0,832				
		My values are largely the entrepreneurial profession's one	0,817	0,805				
		I feel as the entrepreneurs' problem are my own	0,592	0,548				
		Being an entrepreneur is important for my self-image	0,641	0,573				
		I feel like "part of the family" of the entrepreneurs	0,776	0,738				
		I identity with the entrepreneurial profession	0,891	0,835				
		I am enthusiastic about being an entrepreneur	0,731	0,717				
Continuance commitment	Continuance commitment (<i>focus: project</i>)	I feel that I have to few option to consider stopping my entrepreneurial project now	0,761	0,546	0,861	0,891	.72	yes
		Too much of my life would be disrupted if I decided to stop my project now	0,720	0,685				
		If I stopped my project today, there would not be any alternative for me	0,740	0,544				

		Even if I wanted, it would be very costly to stop this project right now	0,758	0,647				
	Continuance commitment (<i>focus:</i> profession)	Too much of my life would be disrupted if I decided to change profession (and to become a wage-earner)	0,869	0,795				
		I have put too much of myself into the entrepreneurial profession to consider changing now	0,865	0,804				
		Changing profession now (and becoming a wage-earner) would require considerable personal sacrifice	0,852	0,793				
		I don't know what I would do if I weren't an entrepreneur	0,788	0,756				
		Becoming a wage-earner would now would be too costly for me	0,701	0,621				
Normative commitment	Normative commitment (<i>focus:</i> profession)	I would feel guilty if I stopped my entrepreneurial project now	0,731	0,667	0,726	0,814	.78	yes
		I ought a lot to the people involved in my entrepreneurial project	0,684	0,602				

		I would not stop my project because of my loyalty to the people involved in it	0,719	0,675				
		Even if it were to my advantage, I do not feel it would be right to leave my organization now	0,746	0,671				
	Normative commitment (focus: project)	I feel a responsibility to continue in the entrepreneurial profession	0,845	0,671				
		I stay entrepreneur because of my sense of duty	0,806	0,606				
Resources investment	Money	For my entrepreneurial project, I have invested my financial resources		0,720	0,837	0,892	.67	yes
	Time	For my entrepreneurial project, I have invested my time		0,760				
	Emotion 1	A lot of my thoughts is dedicated to my entrepreneurial project		0,877				
	Emotion 2	My entrepreneurial project is my number one priority		0,910				