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## Article

# Understanding Business Takeover Intentions—The Role of Theory of Planned Behavior and Entrepreneurship Competence

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**Abstract:** Entrepreneurial intentions have been extensively studied, but little is known about the intended mode of entry into entrepreneurship and its antecedents. This study tests the utility of the theory of planned behavior in a new, more specific context, namely business takeover intentions. The impact of entrepreneurship competence on antecedents of takeover intentions is explored. Entrepreneurship competence is measured using a scale based on the EntreComp framework. Data ( $N = 1373$ ) were gathered from two institutes of higher education in Finland and analyzed using logistic regression. The results show that the TPB can be useful in investigating takeover intentions. The subjective norm has a notable and direct effect on takeover intentions, but the effect of entrepreneurship competence is mediated by attitudes and perceived behavioral control. The effect of parental role models on takeover intentions is significant, although the study is not limited to family successions; gender is also significant. The results show that the relationship between takeover intentions, entrepreneurship competence, and family role models is a complex one. Future studies on entrepreneurial intentions should pay attention to the differences in antecedents of entry modes.



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**Keywords:** business transfer; business takeover; entrepreneurial intentions; theory of planned behavior; entrepreneurship competence

## 1. Introduction

Aging is a major challenge for European society. The proportion of people over the age of 65 in the EU is expected to increase to around 31% by 2100 compared to around 20% in 2019 (Eurostat 2020). As populations age, so too do entrepreneurs; Lévesque and Minniti (2011) point out that low levels of entrepreneurial activity should be expected especially in countries with populations with an older profile. Retiring entrepreneurs' firms face a continuity challenge: who will take over?

According to surveys, 20–25% of SMEs will find a successor within the family, while almost 40% are looking for external buyers (Varamäki et al. 2015, 2018; Battisti and Okamuro 2010). In Finland, according to the latest national business transfer barometer, approximately 34,000 firms will be put up for sale in the next decade, and approximately 13,500 firms are expected to continue through succession within the family. This means that according to the aging entrepreneurs' expectations, there should be approximately 5000 business transfers each year in Finland (Varamäki et al. 2018). Expectations and intentions concerning exits from business have received increasing attention from researchers in the past two decades (e.g., DeTienne and Cardon 2012; Ryan and Power 2012; Wennberg and DeTienne 2014; DeTienne et al. 2015). For small businesses in particular, the entrepreneur's exit generally means either closure or takeover of the business by a new owner. There are surprisingly few studies, however, that consider the other side of the exit coin—that is, the people that take over the business. Although the mode of entry into entrepreneurship is of great practical relevance to both entrepreneurs seeking to exit and to policymakers concerned with economic growth, relatively little is known about

what drives the decision to become an entrepreneur through the acquisition of an existing business rather than through the start-up route (Block et al. 2013).

Social and financial capital and also networks influence the choice of entry mode (Bastié et al. 2013; Parker and Praag 2012), and educational attainment also seems to be strongly connected with new venture creation (Parker and Praag 2012), although the positive effect of education on firm survival is noted in the context of both takeovers and new ventures (Xi et al. 2017). However, business takeovers are not only about survival—that is, maintaining the number of businesses; business transfers have the potential to transform firms and to contribute to strategic renewal (Barney 2001; Priem and Butler 2001; Haspeslagh and Jemison 1991; see also Varamäki et al. 2012). There is some evidence to suggest that those who become entrepreneurs when older are likely to contribute less to job creation (Kautonen et al. 2014; de Kok et al. 2010) and that younger entrepreneurs are more oriented to social goals than those who are middle-aged (Brieger et al. 2020). From the perspective of renewal and societal gain, potential entrepreneurs in higher education are, thus, a particularly interesting group to consider.

Few higher education students become entrepreneurs immediately following graduation (see Shirokova et al. 2016), but higher education institutes have taken a healthy interest in building up their students' entrepreneurial competences (see, e.g., Taatila 2010). The European Union has set the promotion of an entrepreneurial mindset as a core policy objective (EU Council), and entrepreneurial skills are considered highly desirable in employees as well (Lackéus et al. 2020). Although the EU approach to entrepreneurial competencies views entrepreneurship as a transversal key competence necessary for all citizens (Bacigalupo et al. 2016), traditionally, entrepreneurship competence is associated with competence in the role of an entrepreneur. The literature on entrepreneurial intentions is similarly focused (Lundqvist et al. 2019), concerned with explaining the intent to become an entrepreneur. Among the most popular approaches to the study of entrepreneurial intention is the theory of planned behavior (see Maalaoui et al. 2018), which explains intentions through their three antecedents: attitude, perceived ease or difficulty, and subjective norm. All three antecedents relate to the focal individual's interpretation of his/her situation and, hence, may alter as self-perceptions of competence alter.

Block et al. (2013) call for a more detailed exploration of the dynamics of preferences and intentions regarding the mode of entry. We extend on studies on entrepreneurial intentions to examine factors explaining business takeover intentions in higher education students. We apply the theory of planned behavior and examine the indirect effect of entrepreneurship competence. The specific objectives are threefold: to examine (1) the validity of the theory of planned behavior (TPB) in explaining business takeover intentions, (2) the mediating effect of attitudes and perceived behavioral control (PBC) on the relationship between entrepreneurship competence and business takeover intentions, and (3) the effect of gender and parental entrepreneurship on business takeover intentions.

## 2. Theoretical Framework and Hypothesis Development

### 2.1. Theory of Planned Behavior and Business Takeover Intentions

The TPB is one of the most applied theories in research on entrepreneurial intentions (see Maalaoui et al. 2018). It is an extension of Ajzen's and Fishbein's theory of reasoned action and assumes that intention precedes behavior, and the stronger the intention, the more likely is the behavior in question to occur (Ajzen 1991).

In the TPB, three factors explain intention: the subjective norm, PBC, and attitude. PBC has a double role in the theory; it explains intentions, but if realistic, it can also directly predict behavior. PBC is defined as "perception of the ease or difficulty of performing the behavior of interest" (Ajzen 1991, p. 183). In the context of entrepreneurship, this means that if an individual perceives entrepreneurial action as being very challenging, it will negatively affect his/her intentions to become an entrepreneur. Attitude refers to a tendency to respond favorably or unfavorably to an object (Ajzen and Fishbein 1980). In explaining entrepreneurial intentions, this means that if attitudes to entrepreneurship

are negative, it is not likely for an individual to be engaged in entrepreneurial ventures. Attitudes can be negative, neutral, or positive and can be instrumental or experiential (Ajzen and Fishbein 2005). The effect of the subjective norm is based on the assumption that the social environment shapes people's intentions and actions. In TPB, the subjective norm refers to an individual's perception of social pressure from important others (e.g., family, friends) concerning the behavior in question. Hence, if a person feels that they do not have support from the people closest to them become an entrepreneur, this has a negative effect on their entrepreneurial intentions.

Business transfer intention refers to the intention of an individual to acquire an existing business or to sell a business owned by the individual. We hold that business transfer intentions are comparable to other any intention to engage in planned behavior—that is, business transfers do not occur spontaneously without specific intention. Applications of the TPB on entrepreneurship have demonstrated that entrepreneurship is largely about intentional behavior (Krueger et al. 2000). In the context of this study, business takeover intention refers specifically to the intention to become an entrepreneur by acquiring an existing business or through family succession.

TPB has been used in entrepreneurial intention research for decades. One of the most cited papers is from Krueger and Carsrud (1993), who introduced TPB as a robust theory in research on the emergence of new organizations. Later, Kautonen et al. (2015) showed that the antecedents of intentions in TPB (PBC, attitudes, and the subjective norm) jointly explain 59% of the variation in entrepreneurial intentions. They found strong support for all hypothesized relationships in TPB, and they were robust across a range of different demographic and biographical characteristics of individuals. The most relevant factor explaining intention was the subjective norm ( $\beta = 0.54$ ;  $p < 0.001$ ), followed by attitude ( $\beta = 0.23$ ,  $p < 0.001$ ) and PBC ( $\beta = 0.12$ ;  $p < 0.001$ ). Thus, their research gave strong support for the relevance of the TPB in examining entrepreneurial intentions. Joensuu-Salo et al. (2015) also found support for TPB in explaining entrepreneurial intention. In their sample, the most significant predictors of entrepreneurial intentions were attitude ( $\beta = 0.37$ ;  $p < 0.001$ ) and PBC ( $\beta = 0.31$ ;  $p < 0.001$ ), while the subjective norm contributed the least (but still significantly) in explaining entrepreneurial intentions ( $\beta = 0.09$ ;  $p < 0.001$ ). However, there are controversial results relating especially to the effect of the subjective norm. Krueger et al. (2000) tested the TPB and found no significant effect for the subjective norm on entrepreneurial intentions. The most important factor explaining entrepreneurial intentions was PBC; thus, the results differed considerably from those of Kautonen et al. (2015). However, the findings of Engle et al. (2010) support the importance of the subjective norm in explaining entrepreneurial intentions. The last study tested the TPB in 12 countries and found that the significance of the antecedents in explaining entrepreneurial intentions differed between countries, but the social norm was a significant predictor in each country.

The TPB has also been criticized. Tornikoski and Maalaoui (2019) interviewed Professor Ajzen to address concerns over issues that included intent as a dynamic process, the issue of commitment, the impact of the time element, and the intention–action gap. The responses to the interview led Tornikoski and Maalaoui to suggest several perspectives for future research, including a focus on specific entrepreneurial behavior. The current research concentrates particularly on business takeover, and business takeover intention is viewed as one specific form of entrepreneurial intention.

As mentioned above, entrepreneurial intentions have been extensively studied, but the distinction between entry modes to entrepreneurship is not always explicit. Parker and Praag (2012) pointed out aggregation problems that may ensue when different entry modes are combined, although Kolvereid (2016), for example, concluded that the intention to start a business/to become self-employed is largely interpreted by respondents in surveys as the same thing. Iakovleva and Kolvereid (2009) did find that, for Russian students at least, the intention to acquire a business is distinctly different from other entrepreneurial intentions.

There is evidence to suggest that paths to new venture creation differ from those to business takeover. Xi et al. (2017) found that in relation to the entry mode to hybrid

entrepreneurship, new venture creation is associated with management experience and educational attainment, but business takeover is associated with the female gender, experience in salaried positions, and having received social benefits. In partial contrast, Parker and van [Parker and Praag \(2012\)](#) assert that managerial experience promotes the takeover mode. They, too, found new venture creation to be associated with higher levels of education. [Block et al. \(2013\)](#) similarly found a positive relationship between education and new venture creation, and also noted that age increases takeover preferences. Altogether, these results suggest that the characteristics and competences of a would-be entrepreneur make a difference regarding the choice of entry mode, thus warranting a study of takeover intentions.

Based on the TPB, we expect that attitudes to entrepreneurship, subjective norms, and PBC all explain the formation of business takeover intention. We therefore present the following hypotheses:

**Hypothesis 1 (H1):** *Attitudes predict business takeover intentions.*

**Hypothesis 2 (H2):** *PBC predicts business takeover intentions.*

**Hypothesis 3 (H3):** *Subjective norm (SN) predicts business takeover intentions.*

Different factors can intervene with the interplay of intention and its antecedents. For example, [Santos and Liguori \(2019\)](#) show that the impact of entrepreneurial self-efficacy on entrepreneurial intentions is partially mediated by entrepreneurial outcome expectations and moderated by subjective norms. [Lechuga Sancho et al. \(2020\)](#) demonstrated that attitudes can act as a moderator; when positive attitudes to entrepreneurial career strengthen, the direct effect of PBC on intentions increases. One factor affecting attitudes and PBC might be entrepreneurship competence. [Daliman et al. \(2019\)](#) examined the effect of entrepreneurial competence on entrepreneurial intentions and found a significant positive effect, which was mediated by a combination of attitudes and perceptions of entrepreneurial control. Next, the concept of entrepreneurship competence is reviewed.

## 2.2. Entrepreneurship Competence

Competence can be seen as a set of knowledge, capabilities, characteristics, and attitudes that are prerequisites to good performance, and the elements of that set of components combine to accomplish the behavior in question ([Ismail et al. 2015](#)). [Mitchelmore and Rowley \(2010\)](#) stated that competencies should not be seen as the task of the job, but should be viewed as the essential personal traits, skills, knowledge, and motives that enable people to do the task. Hence, entrepreneurial competencies can be seen as encapsulating the capacity of entrepreneurs to succeed ([Man et al. 2002](#)) and as part of the wider concept of entrepreneurship competence ([Lilleväli and Täks 2017](#)). Entrepreneurial competence is composed of several sub-competences (e.g., initiative-taking, creativity, performance orientation, problem-solving, and risk-taking ability), which, together, make up a generic entrepreneurial competence (see [Schelfhout et al. 2016](#)). Entrepreneurial competencies can be managerial, technical/functional, or entrepreneurial ([Chandler and Jansen 1992](#)). [Man et al. \(2002\)](#) found 10 areas of entrepreneurial competency, namely opportunity, relationship, analytical, innovative, operational, human, strategic, commitment, learning, and personal strength competencies. [Mitchelmore and Rowley \(2010\)](#) defined entrepreneurial competencies as “a specific group of competencies relevant to the exercise of successful entrepreneurship”.

There have been attempts to measure entrepreneurial competencies in prior research. [Oosterbeek et al. \(2010\)](#) used the so-called Escan, a validated self-assessment test to measure entrepreneurial competencies that works with 10 competencies, namely need for achievement, need for autonomy, need for power, social orientation, self-efficacy, endurance, risk-taking propensity, market awareness, creativity, and flexibility. [Oosterbeek et al. \(2010\)](#) further categorized these competences into traits and skills, arguing that traits



are more stable than skills. Oosterbeek et al. (2010) did not find very promising results regarding the effects of entrepreneurship education and reported that entrepreneurship education affected neither entrepreneurial competences nor entrepreneurial intentions among students. Nikitina et al. (2020) examined how the entrepreneurial competences demanded by markets are aligned with the educational entrepreneurship and business-supporting policies in Finland, Latvia, and the Netherlands. Using focus groups and semi-structured interviews, the study found that ethical and sustainable thinking as well financial and economic literacy were the least important competences identified by entrepreneurs, while motivation and perseverance were the most important.

Despite there being research available on entrepreneurial competencies, Ferreras-Garcia et al. (2019) pointed out that it is still difficult to find a precise identification of entrepreneurial competences. The lack of mutual understanding was also recognized by the European Commission, which promoted an initiative to develop a framework for entrepreneurship competencies. The initiative led to the development of what is known as the EntreComp framework to find a shared definition of entrepreneurship competence (Bacigalupo et al. 2016). It should be noted that Bacigalupo et al. (2016) used the concept of entrepreneurship competence instead of entrepreneurial competence. The EntreComp framework was developed by multiple researchers through a mixed-methods approach. In the EntreComp framework, entrepreneurship is defined as the capacity to turn value-generating ideas into action, and as a transversal key competence needed by every citizen to secure personal fulfillment and development, active citizenship, social inclusion, and employment in the knowledge society (Bacigalupo et al. 2016). Hence, entrepreneurship competence is seen as something more encompassing than the narrower definition of entrepreneurial competence, which concentrates on competencies that entrepreneurs require to be successful. In this study, entrepreneurship competence is seen as an ability to create value for others and turn ideas into action with the required resources. The concept of entrepreneurship competence, therefore, includes the entrepreneurial competencies necessary to this value creation process.

The EntreComp framework of entrepreneurship competence consists of three inter-related and interconnected areas of (1) “ideas and opportunities”, (2) “resources”, and (3) “into action” (Bacigalupo et al. 2016). Each area consists of five competences, which, together, form the concept of entrepreneurship competence. The “ideas and opportunities” competence encompasses spotting opportunities, creativity, vision, valuing ideas, and ethical and sustainable thinking. The “resources competence” encompasses self-awareness and self-efficacy, motivation and perseverance, mobilizing resources, financial and economic literacy, and mobilizing others. The “into action” competence encompasses taking initiative, planning and management, coping with ambiguity, uncertainty and risk, working with others, and learning through experience.

We suggest that entrepreneurship competence can have an impact on the antecedents of intentions, especially on attitudes and PBC. Attitudes and PBC can mediate the effect of entrepreneurship competence on business takeover intentions. This hypothesis is based on the findings of Daliman et al. (2019), who showed that the effect of entrepreneurial competence on entrepreneurial intentions was mediated by attitudes and perceptions of entrepreneurial control. In addition, Obschonka et al. (2011) showed that during venture creation, entrepreneurial competence predicted entrepreneurial skills, which in turn predicted founders’ growth intentions. Gieure et al. (2020) found that students’ entrepreneurial skills affected subjective norms, which in turn affected entrepreneurial intentions, but attitudes had no appreciable effect on intentions; PCB was omitted in the study. In summary, the previous studies suggest that entrepreneurship competence can indirectly affect intentions. In the context of business takeover intentions, we propose the following hypothesis:

**Hypothesis 4 (H4):** *The effect of entrepreneurship competence (EC) on business takeover intentions is mediated by attitudes and PBC.*

### 2.3. Gender and Parental Role Models in Entrepreneurship

Prior research has shown that both gender and parental role models (i.e., a mother or father working as an entrepreneur) can affect entrepreneurial intention, and also the factors affecting entrepreneurial intention. [Nikou et al. \(2019\)](#) stated that the attitudes and beliefs that drive women to be entrepreneurs differ from those that motivate men. [Zhang et al. \(2014\)](#) found that men have higher levels of entrepreneurial intention than women do. The same finding emerged from a study of university students' entrepreneurial intentions by [Joensuu-Salo et al. \(2015\)](#). [Kelley et al. \(2017\)](#) found that women can lack self-confidence, and that causes them to perceive more hindrances to becoming an entrepreneur than men do, which can, in turn, have an impact on their entrepreneurial intentions. We suggest that this kind of gender effect can also be seen in business transfers and intentions related to business takeovers. Regarding succession, there is a long history in Europe (and in Finland) for a son to inherit the business, and even though the situation has changed dramatically, it is likely still to affect business takeover intentions. On the other hand, buying a business may require a considerable amount self-confidence as the future owner has to take on customers, employees, and the whole business. The gender effect may thus be relevant, as women have less confidence in their skills and abilities related to entrepreneurship ([Kelley et al. 2017](#); [Ladge et al. 2019](#)). We propose the following hypothesis:

**Hypothesis 5 (H5):** *Gender explains business takeover intentions; men are more likely to have business takeover intentions than women.*

Parental role models in entrepreneurship affect entrepreneurial intentions ([Chlosta et al. 2012](#); [Laspita et al. 2012](#)). A father with a professional background as an entrepreneur has a particularly strong impact ([Joensuu-Salo et al. 2015](#)), and this impact is stronger on men than on women ([Hoffmann et al. 2015](#)). According to the findings of [Chlosta et al. \(2012\)](#), the parental role-model factor increases the likelihood of an individual pursuing an entrepreneurial career, but this influence depends on personality factors. [Moreno-Gómez et al. \(2020\)](#) showed that parental role models have a positive relationship with entrepreneurial intentions, and this effect is moderated by gender. The findings of [Nowiński and Haddoud \(2019\)](#) indicate that having inspiring role models predicts entrepreneurial intentions if individuals have positive attitudes to entrepreneurship and self-efficacy. We suggest that the parental role model is an even more important factor when predicting business takeover intentions than generic entrepreneurial intentions. It is obvious that succession requires having a business in the family, but [Parker and Praag \(2012\)](#) referenced Dutch data to show that individuals from business-owning families are more likely than others to take over an existing business, even if that business is not the family firm. [Kailer et al. \(2014\)](#) found that students with a family business background are more likely to have takeover intentions compared to other students. It therefore seems that the role model effect is also apparent in other transfer options (buying a company). We propose the following hypothesis:

**Hypothesis 6 (H6):** *A parental role model for entrepreneurship explains business takeover intentions; individuals with a parental role model are more likely to have business takeover intentions than other individuals.*

## 3. Data and Methods

### 3.1. Data Collection

Data were gathered from two Finnish universities of applied sciences (Seinäjoki and Tampere). Students answered a web-based survey during their first year. The data therefore comprise answers from first-year students gathered in the fall of 2019 and of 2020. Researchers collected 501 answers from 2019 and 872 answers from 2020. Table 1 presents the background variables of the respondents. Among those surveyed, approximately 49%

were women and 51% were men. The respondents were aged between 18 and 58 (mean 24.5). The survey revealed that 37% of the students had a mother or father working as an entrepreneur, and among those, approximately 10% (132) came from a family where both parents worked as an entrepreneur.

**Table 1.** Descriptive statistics of the respondents.

Variable	Descriptive Aspects
Gender	Female, 48.9% ( $n = 671$ ) Male, 50.7% ( $n = 695$ ) Not declared, 0.4% ( $n = 5$ )
Age	Range, 18–58 years Mean, 24.5 years (sd 6.9) Median, 22 years
Mother or father works as an entrepreneur	Yes, 36.9% ( $n = 502$ ) (of which both parents, 10%, $n = 132$ ) No, 63.1% ( $n = 859$ )

### 3.2. Variables

Business takeover intentions were measured by asking: “How likely are you to end up as an entrepreneur through succession or transfer of ownership after graduation (or while still studying)?” with a 7-point Likert scale anchored between very unlikely (1) and very likely (7). In the next phase, we transformed the scale to a dichotomy as zero for having no (or low) intentions (answers 1–4) and one for having business takeover intentions (answers 5–7) to be used in a logistic regression analysis.

The EntreComp framework was used for creating the variables for measuring EC. There are three interconnected entrepreneurship competencies in the framework: (1) Ideas and opportunities; (2) Resources; and (3) Into Action. These all have five sub-competencies, which are described by “hints” in the framework (see [Bacigalupo et al. 2016](#)). We used these 15 hints in developing the items for EC as follows:

#### Ideas and opportunities

EC1: I use my imagination and abilities to identify opportunities for creating value.

EC2: I develop creative and purposeful ideas.

EC3: I work toward a vision of my future.

EC4: I make the most of ideas and opportunities.

EC5: I assess the consequences and impact of ideas, opportunities, and actions.

#### Resources

EC6: I believe in myself and keep developing.

EC7: I know how to stay focused and do not give up.

EC8: I gather and manage the resources I need.

EC9: I have a good understanding of financial and economic issues.

EC10: I inspire, enthuse, and get others on board.

#### Into Action

EC11: I initiate processes that create value and can take up challenges.

EC12: I know how to prioritize, organize, and follow up.

EC13: I make decisions, thus dealing with uncertainty, ambiguity, and risk.

EC14: I know how to team up, collaborate, and network.

EC15: I reflect and learn from both success and failure, my own, and other people’s.

Students were asked to evaluate their skills by rating these statements on a 7-point Likert scale ranging from completely disagree (1) to completely agree (7).

[Ajzen’s \(1991\)](#) TPB was utilized in forming the scales for SN, attitudes, and PBC. We used scales from [Joensuu-Salo et al. \(2015\)](#). PBC was measured with five items. SN was measured with a procedure suggested by [Ajzen \(1991\)](#). Belief items (evaluation of the support from persons close to the individual) were measured with three items (on a 7-point scale from 1 to 7), and motivation to comply was measured by three items (on a 7-point scale from 1 to 7), referring to each of the aforementioned belief questions. For statistical



analysis, the “motivation to comply” items were transformed to a  $-3$  to  $+3$  scale. The belief-based items (coded as ranging from 1 to 7) and the corresponding “motivation to comply” items (coded as ranging from  $-3$  to  $+3$ ) were multiplied and then added to create an index of SN (ranging from  $-63$  to  $+63$ ).

For measuring attitudes, we used four items extracted from Joensuu-Salo et al. (2015). The final scale consisted of the following four attributes with the question: To what extent do the following attributes correspond to your perceptions of entrepreneurship (i.e., establishing a business and working as an entrepreneur)?

1. Interesting
2. Esteemed
3. Worth pursuing
4. Fascinating

The options used a 7-point Likert scale ranging from not at all (1) to completely (7). Gender was operationalized as one for male and zero for female. Mother or father pursuing entrepreneurship was coded as one for yes and zero for no.

### 3.3. Initial Analysis

The EC scale was operationalized for this study; thus, we used an explorative factor analysis to evaluate construct validity through factorial validity (Bannigan and Watson 2009) with principal axis factoring and Varimax rotation. The internal consistency of the scales was evaluated with Cronbach’s alpha using Nunnally’s (1978) recommendations to accept reliabilities of 0.70 or better. Our sample was suitable for using explorative factor analysis based on the Kaiser–Meyer–Olkin measure of sampling adequacy (0.945).

The explorative factor analysis showed that the communality for item EC9 (I have a good understanding of financial and economic issues) was too low (0.262), so we decided to exclude it from the final scale. As a result, the explorative factor analysis produced one factor with an eigenvalue of more than one. The factor explained 48% of the variance. The factor loadings of the items ranged from 0.62 to 0.79. Tabachnick and Fidell (2007) recommended a factor loading of at least 0.32 for a sample size of at least 300 observations. Therefore, all the factor loadings were high enough to include in the EC scale. The Cronbach’s alpha value for the scale was 0.93, which indicates a high reliability ratio.

Cronbach’s alpha was 0.79 for attitudes, 0.75 for PBC, and 0.75 for SN; thus, all exceeded Nunnally’s (1978) recommended level for acceptance. Table 2 presents the correlations for the study variables and the means, ranges, and standard deviations of the scales.

**Table 2.** Correlations, means, standard deviations, and ranges of the variables.

Variable	Mean (sd)	Range	1.	2.	3.	4.	5.	6.
1. Business takeover intentions	0.13 (0.34)	0–1						
2. EC	5.0 (0.89)	1.7–7.0	0.147 ***					
3. Attitudes	5.0 (1.1)	1.0–7.0	0.194 ***	0.331 ***				
4. PBC	4.2 (1.1)	1.0–7.0	0.182 ***	0.487 ***	0.392 ***			
5. SN	−5.3 (18.2)	−63–63	0.115 ***	−0.016	0.101 ***	−0.079 **		
6. Gender	0.51 (0.50)	0–1	0.081 **	0.060 *	0.088 ***	0.164 ***	−0.50	
7. Mother or father an entrepreneur	0.37 (0.48)	0–1	0.265 ***	0.096 ***	0.135 ***	0.200 ***	−0.005	−0.010

Note: \*, \*\*, \*\*\* indicate significance at the 90%, 95%, and 99% level respectively.

Business takeover intentions included both transfer options: succession and other transfer of ownership such as buying a company. We wanted to check how many students had business takeover intentions without a family business background; otherwise, the variable could only measure succession intentions. Table 3 presents the cross-tabulation of the variables. It shows that there were 53 students with business takeover intentions

but no family business background. It can be assumed that students with no family business background have no succession intentions, but might have other business takeover intentions (such as buying a company). We concluded that the variable measures business takeover intentions including both transfer options of succession and buying a company. In addition, individuals with a family business background can have buying intentions beyond the family business—an option not excluded by the variable.

**Table 3.** Cross-tabulation of business takeover intentions and mother or father’s entrepreneurship.

		Mother or Father Works as an Entrepreneur		Total
		No	Yes	
Business takeover intentions	No	805	377	1182
	Yes	53	123	176
Total		858	500	1358

## 4. Results

### 4.1. Logistic Regression Analysis

We used logistic regression analysis to examine the relationships of the study variables. Logistic regression analysis is suitable for cases where the dependent variable is dichotomous—in this case, business takeover intentions (yes or no). Logistic regression analysis is one of the most commonly used methods for analyzing binary data (Hilbe 2009). In logistic regression analysis, the predictor variables may be continuous, categorical, or indicator/binary variables. In our study, we had binary variables (gender and mother or father’s entrepreneurship) and continuous variables (EC, attitudes, PBC, and SN). Menard (2010) stated that the idea of logistic regression analysis is to examine if independent variables predict the classification of cases into categories of the dependent variable. In logistic regression analysis, the odds of being classified as a case are of interest. Strickland (2017, p. 34) defines odds as “the probability that a particular outcome is a case divided by the probability that it is a noncase”.

Hilbe (2009) recommends using Pseudo-R<sup>2</sup> statistics such as the Nagelkerke R-squared or Cox and Snell R-squared measures to evaluate a model. In addition, O’Connell (2006) suggests using the Hosmer–Lemeshow and Omnibus test of Model Coefficients to examine the model fit and statistical significance. All of the above tools were used to evaluate the models in this study.

We examined three models to evaluate the strength of each predictor variable and possible mediation. In the first model, only the control variables, gender and mother or father’s entrepreneurship, were included in the model. The results show that both of these predictors are significant. Parental entrepreneurship is the most powerful predictor variable; those students with a mother or father working as an entrepreneur proved over five times more likely to harbor business takeover intentions. Male students also showed a higher probability (1.7) of having business takeover intentions than female students. The model predicted 87% of the cases correctly. The Nagelkerke R-squared is 0.14 and the Cox and Snell R-squared is 0.08. The Omnibus test of Model Coefficients indicates the statistical significance of the model ( $p < 0.000$ ).

In Model 2, EC was added to the model. The results show that EC is a significant predictor of business takeover intentions (B 0.485; Exp (B) 1.625;  $p < 0.001$ ). The model is significant (Omnibus test 126.739;  $p < 0.001$ ), and the Pseudo-R<sup>2</sup> statistics are higher than those in Model 1.

In Model 3, the antecedents of intention based on Ajzen’s (1991) TPB were added to the model. Table 4 shows that all of the variables of TPB are significant predictors of business takeover intentions as expected; attitudes (B 0.381, Exp (B) 1.463;  $p < 0.001$ ), PBC (B 0.257; Exp (B) 1.293;  $p < 0.05$ ) and SN (B 0.017; Exp (B) 1.017;  $p < 0.001$ ) all explain business takeover intentions. To reveal the relative importance of different factors, coefficients can

be standardized, and one way of doing so is to divide the unstandardized coefficient by its standard error (Menard 2004). The standardized coefficients show that the most important factor of TPB antecedents explaining business takeover intention is SN (0.425), followed by attitudes (0.381) and PBC (0.242). The standardized coefficients are presented in Figure 1.

Table 4. Results from the logistic regression analysis.

	Model 1	Model 2	Model 3
Gender	B 0.551 *** Exp (B) 1.734 S.E. 0.173 Wald 10.136	B 0.527 ** Exp (B) 1.694 S.E. 0.175 Wald 9.080	B 0.428 * Exp (B) 1.534 S.E. 0.180 Wald 5.631
Mother or father working as an entrepreneur	B 1.657 *** Exp (B) 5.242 S.E. 0.179 Wald 85.692	B 1.610 *** Exp (B) 5.002 S.E. 0.180 Wald 79.545	B 1.524 *** Exp (B) 4.590 S.E. 0.186 Wald 67.421
EC		B 0.485 *** Exp (B) 1.625 S.E. 0.106 Wald 21.154	B 0.202 Exp (B) 1.224 S.E. 0.126 Wald 2.565
Attitudes			B 0.381 *** Exp (B) 1.463 S.E. 0.100 Wald 14.615
PBC			B 0.0257 * Exp (B) 1.293 S.E. 0.106 Wald 5.914
SN			B 0.017 *** Exp (B) 1.017 S.E. 0.004 Wald 15.732
Omnibus Chi-square	104.558 ***	126.739 ***	170.257 ***
Hosmer and Lemeshow test	2.938 (p = 0.230)	5.157 (p = 0.741)	7.445 (p = 0.489)
Nagelkerke R-squared	0.139	0.168	0.222
Cox and Snell R-squared	0.075	0.09	0.119
Predicted overall percentage	87%	87%	88%

Note: \*, \*\*, \*\*\* indicate significance at the 90%, 95%, and 99% level respectively.

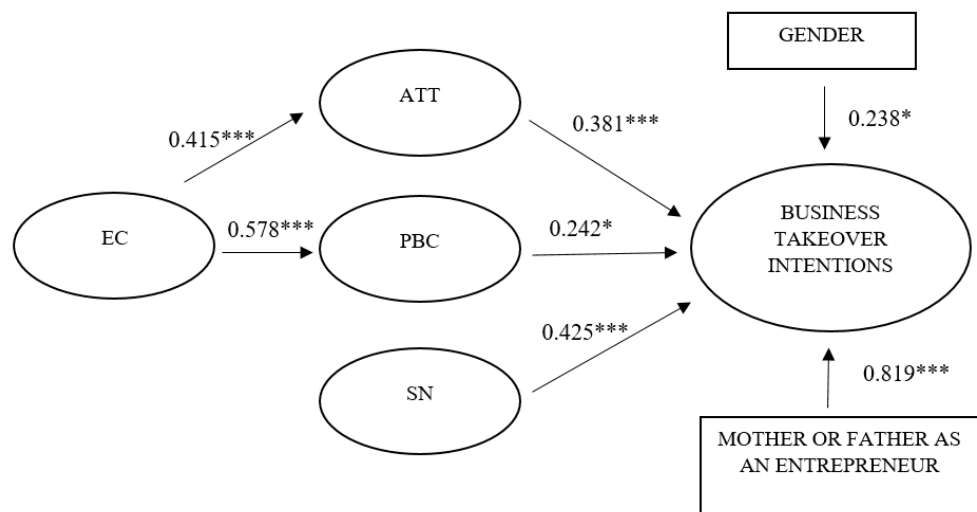


Figure 1. Final model for business takeover intentions with standardized coefficients. Note: \*, \*\*\* indicate significance at the 90% and 99% level respectively.

In addition, gender and mother or father's entrepreneurship are significant variables in the model, with mother or father's entrepreneurship being the most significant variable in it (standardized coefficient 0.819). Students that have either parent working as an entrepreneur are over four times more likely to have business takeover intentions than students with no such background. Men are more likely to have business takeover intentions than women are (standardized coefficient 0.238).

The EC variable was not significant in Model 3 when PBC, SN, and attitudes were added to the model. This suggests that EC is mediated by some of these variables. This was tested in the next phase. Model 3 predicted 88% of the cases correctly, and the Pseudo-R<sup>2</sup> statistics are higher than those in Model 1 or Model 2. The Omnibus test of Model Coefficients results indicate the statistical significance of the model ( $p < 0.000$ ), as do the non-significant Hosmer and Lemeshow chi-squared test results.

#### 4.2. Testing the Mediation

In the last phase, we examined the mediation effect. The results of the logistic regression analysis suggest that either attitude, PBC, or SN can mediate the effect of EC. For testing the mediation, the procedure recommended by Baron and Kenny (1986) was followed. They suggest four steps using several regression analyses and analyzing the coefficients in each step. First, zero-order relationships among variables were tested in steps 1–3. The initial step involves checking if the relationship between EC and business takeover intentions is significant. This effect was already tested in the logistic regression analysis showing that EC significantly predicts business takeover intentions. In the second step, the relationships between EC and attitudes, EC and PBC, and EC and SN should be significant. This effect was tested using a separate linear regression analysis for each relationship. The results are presented in Table 5. The results show that the effects of EC on attitudes ( $\beta = 331$ ;  $p < 0.001$ ) and on PBC ( $\beta = 487$ ;  $p < 0.001$ ) are both significant. However, the effect of EC is not significant on SN, and consequently, in this step, SN was excluded as a possible mediator.

**Table 5.** Testing mediation, results from step 2.

Relationship	B ( $\beta$ )	Sig.	Adjusted R <sup>2</sup>
The effect of EC on attitudes	0.415 (0.331)	$p < 0.001$	0.11
The effect of EC on PBC	0.578 (0.487)	$p < 0.001$	0.24
The effect of EC on SN	−0.326 (−0.016)	-	0.00

In the third step, the effect of PBC on business takeover intentions and the effect of attitudes on business takeover intentions should be significant if mediation exists. This effect was already examined in the logistic regression analysis in Model 3. The results show that both attitudes and PBC significantly predict business takeover intentions. Accordingly, steps 1–3 verified that attitudes and PBC can mediate the effect of EC on business takeover intentions following the procedure of Baron and Kenny (1986).

In the fourth and last step of the approach by Baron and Kenny (1986), full or partial mediation is examined. Some form of mediation is supported if the effects of attitudes and PBC on business takeover intentions remain significant after controlling for EC. If the effect of EC is no longer significant when attitudes and PBC are controlled for, the finding supports full mediation. If EC is still significant (i.e., attitudes, PBC, and EC all significantly predict performance), the finding supports partial mediation.

The fourth step involved undertaking a logistic regression analysis in Models 2 and 3, as presented in Table 4. The EC variable was no longer a significant predictor in the model when attitudes and PBC were added to it. Attitudes and PBC are both significant predictors of business takeover intentions. The results support full mediation; both attitudes and PBC fully mediate the effect of EC on business takeover intentions.

The final model is presented in Figure 1. All of the hypotheses are supported. The results from both the logistic regression analysis and the mediation test are summarized in

the figure. It should be noted that the estimates in the figure are from the linear regression analysis (standardized coefficients  $\beta$  presented) and from the logistic regression analysis (standardized coefficients calculated by dividing each coefficient by its standard error).

## 5. Discussion

This study extends the previous research on the factors predicting entrepreneurial intentions by focusing on a specific form of intention: business takeover intention. In doing so, it responds to the suggestion made by [Tornikoski and Maalaoui \(2019\)](#) that research should focus on specific entrepreneurial behavior. Business transfers are important in society as they contribute to the vitality and performance of national economies ([Van Teeffelen 2012](#)), and it is therefore important to understand the drivers of business takeover intentions among young people. The current research establishes that the TPB is a useful framework for understanding business takeover intentions, and that EC has an important indirect role that is mediated through attitudes to entrepreneurship and PBC. Having a parental role model has the strongest influence on business takeover intentions, and gender also plays a role. Next, we will discuss the findings in detail.

Our first objective was to examine the validity of the TPB in explaining business takeover intentions. Our results show that attitudes to entrepreneurship, PBC, and the SN all significantly explain business takeover intentions. Standardized coefficients show that the most important variable explaining business takeover intentions from the basic antecedents in the TPB is the SN, followed by attitudes to entrepreneurship. Perceived behavioral control also has statistical value, but its importance in explaining business takeover intentions is smaller. Comparing the results with prior research explaining generic entrepreneurial intentions, in the specific context of business transfer intentions, the findings offer support for the relevance of the SN and are consistent with the results of [Kautonen et al. \(2015\)](#), which found the SN to be the most important predictor of entrepreneurial intentions. Moreover, [Engle et al. \(2010\)](#) showed the value of the SN in explaining entrepreneurial intentions in different countries. However, [Krueger et al. \(2000\)](#) found no effect of the SN on entrepreneurial intentions. As the results from prior research on generic entrepreneurial intentions concerning the SN are somewhat controversial, our findings extend the understanding. In particular, when predicting business takeover intentions, the SN is of substantial importance. Regarding PBC, it may be that the effect is more important in predicting generic entrepreneurial intentions. In the research of [Joensuu-Salo et al. \(2015\)](#) regarding entrepreneurial intentions of higher education students, PBC had a strong predictive value. In our research, PBC has statistical value, but the effect is much smaller than of the SN or attitudes. We conclude that among the antecedents, the SN is the most significant predictor of business takeover intentions. This can be related to the robust importance of parental entrepreneurship found in this research.

The second objective of this study was to examine the mediating effect of attitudes and PBC on the relationship between EC and business takeover intentions. Our results show that EC has a strong effect on business takeover intentions, but the effect is fully mediated by attitudes and PBC. Entrepreneurship competence has a strong positive relationship with attitudes to entrepreneurship and PBC. Our findings fully support those of [Daliman et al. \(2019\)](#) and are in line with the results of [Obschonka et al. \(2011\)](#). The conclusion is that takeover intentions are comparable to entrepreneurial intentions in general, and EC contributes to explaining takeover intentions through attitudes and PBC. Attitudes, PBC, and EC also correlate with parental role models, which suggests that parental role models influence the development of all three.

The last objective related to the possible impacts of gender and parental role models in entrepreneurship. The results show that men have higher business takeover intentions than their female counterparts. In the specific context of business transfer intentions, this supports the findings of prior research ([Zhang et al. 2014](#); [Joensuu-Salo et al. 2015](#)). Our results do not explain why this might be so. However, based on prior research on gender and entrepreneurship (e.g., [Kelley et al. 2017](#); [Ladge et al. 2019](#)), the result may relate to



the lower self-confidence of women. On the other hand, the finding may also relate to the history and norms in family business succession. In the past, daughters were not seen as potential successors as much as boys were, and instead, women were anticipated to become employees or supportive mothers or daughters in family businesses (Kubiček and Machek 2019). Sharma (2004) stated that a review of more than 200 articles relating to family businesses showed that women have mostly remained in the background in family firms. This societal phenomenon may be reflected in our results.

Regarding parental role models, our results show that a mother or father's entrepreneurship predicts business takeover intentions more than any other variable in our study, making parental entrepreneurship a vital factor in business takeover intentions. For there to be succession, there must, of course, be a family business to pass on, but our variable included the external takeover option as well. We suggest that a parental role model is a key factor in business takeovers and one that may also affect other drivers. The correlation table of our study showed that having a parental role model correlated not only with business takeover intentions but also with attitudes, PBC, and EC. Further research would be required to fully understand the role of parental entrepreneurship in seeding business takeover intentions. However, in the context of takeover intentions, our results support the results of prior research on the importance of parental role models in explaining entrepreneurial intentions (Chlosta et al. 2012; Laspita et al. 2012) and Parker and Praag's (2012) results on choice of entry mode. Nowiński and Haddoud (2019) suggested that a parental role model affecting entrepreneurial intentions also requires positive attitudes and self-efficacy from the offspring. Our results show that concerning business takeover intentions, a parental role model has a direct and substantial influence. However, the correlations suggest that growing up with entrepreneurial parents might stir an individual to develop entrepreneurial competence, a positive attitude to entrepreneurship, and a strong belief in the ability to succeed as an entrepreneur to a greater degree than among individuals without an entrepreneurial parental role model. These factors in turn have an impact on business takeover intentions. Thus, having an entrepreneurial parental role model may have both a direct and indirect relationship with business takeover intentions. Nowiński and Haddoud (2019) also highlighted that the absence of role models leads to a weak entrepreneurial intention. This could be a more complex phenomenon than we currently understand and may relate to upbringing but also to genes. Socialization (e.g., Falck et al. 2009) into the world of entrepreneurship may account for the effect.

## 6. Conclusions

Our study contributes to the stream of research applying the TPB to entrepreneurial settings by extending the theory to a previously unaddressed specific category of entrepreneurial intentions, namely business takeover intentions. The results increase our understanding of entrepreneurial intentions by clarifying the impact of the TPB antecedents and demonstrating the applicability of TPB to the context of business takeover intentions. Furthermore, the results show that takeover intentions differ from general entrepreneurial intentions. As Block et al. (2013) noted, relatively little is known thus far about the drivers of the decision to become an entrepreneur by acquisition; our results contribute to closing this gap. Although the results from prior research on generic entrepreneurial intentions vary somewhat with regard to the importance of the SN, the present study shows its importance in the context of business takeover intentions. Earlier studies examining general entrepreneurial intentions have provided mixed results on the significance of the SN, and in a similar setting (i.e., Finnish higher education students), Joensuu-Salo et al. (2015) found the SN to be the least important antecedent for general entrepreneurial intentions. The combined importance of the SN and parental role models suggests that business takeover intentions are indeed different from overall entrepreneurial intentions. Family background is very important in all forms of entrepreneurship and entrepreneurial intention, but the distinction in this case suggests that to form takeover intentions, an individual needs to feel supported by their close circle.

In much of the entrepreneurial intention research, different modes of entry (new venture creation, family succession, and buying a business) remain unexamined. There is increasing evidence that entry modes differ in their requirements and in how they influence firm survival. Our results contribute by showing that since differences in antecedents exist, studies on entrepreneurial intentions should take into consideration the different entry modes, and that the relationship between takeover intentions, EC, and family role models is also complex and worthy of consideration. Future studies on entrepreneurial intentions should consider specifically addressing the different entry modes.

Many family businesses lack successors but need not fail outright: they can be taken over by entrepreneurs who come from outside of the family, as [Parker and Praag \(2012\)](#) pointed out. Our results shed some light on the factors behind the intentions of potential takeover candidates. The presence of an entrepreneurial role model in the family is clearly an important factor, even when family succession is not anticipated. [Van Teeffelen et al. \(2014\)](#) suggested that students' perceived ability to act on their entry mode preferences may be limited by a perceived lack of human capital; it is possible that the tacit knowledge gained by having a role model mitigates this effect.

Furthermore, [de Jong and Marsili \(2015\)](#) reported that business-owning relatives or friends being the source of inspiration for becoming an entrepreneur is associated with better post-entry survival, but only when entrepreneurs start by taking over an existing business or investing their time heavily when starting. In other words, taking over an existing business when inspired by close entrepreneurial ties leads to greater chances of success, whereas for people embarking on an entirely new business, such inspiration does not matter. Read in conjunction with our results, this suggests that those planning business transfer promotion activities should give careful consideration to targeting the children of entrepreneurs, not only as successors but also as potential buyers.

[Van Teeffelen et al. \(2014\)](#) stated that students' entry mode intentions are not necessarily well informed, and that they may alter as knowledge concerning the options improves. The results reported above suggest that individuals with entrepreneurial role models are better informed in this regard; the implication is that entrepreneurship educators should pay more attention to including the possibility of takeover as an entry mode in the curriculum and give at least an overview of the possible benefits alongside outlining the obstacles. Entrepreneurship education naturally focuses on innovation and new ideas, which may somewhat underplay the possibility of renewing the old.

It is a limitation of our study that family successions and buying a business were combined in one item. Although both forms of business takeover have much in common, there are also notable differences in the logic of the process and the challenges the incoming entrepreneur faces. Future studies should make this distinction clear.

Another noteworthy aspect of the research design is that our measure of EC was derived from the EntreComp framework ([Bacigalupo et al. 2016](#)) and so measures generic transversal EC. In examining entrepreneurial intentions and specifically intentions to become an entrepreneur by taking over a business, more business-focused items should also be examined.

The results suggest that parental role models are connected to developing EC, a positive attitude to entrepreneurship, and a general belief in one's ability to succeed in entrepreneurship. The effect of EC is mediated by attitudes and PBC. Further studies should contrast the direct and indirect impacts of family background on intentions with regard to different modes of entry. A more detailed understanding of how parental role models influence the development of EC and its impact on intentions is also merited.

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