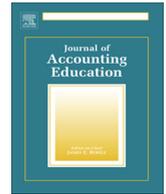




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## Main article

## Beliefs influencing students' career choices in Sweden and reasons for not choosing the accounting profession

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## ABSTRACT

This study, employing the simplified Theory of Reasoned Action (TRA), investigates student beliefs that influence their attitudes and subjective norms, leading them to not choose the accounting profession in Sweden. Questionnaires were sent electronically to first-year and second-year university students, and, after applying the exclusion criteria, the sample size comprised 228 students. The results reaffirmed the simplified TRA model and revealed that both behavioral (no personal interest in accounting, a boring profession, and higher salaries in other occupations) and normative beliefs (the influence of teachers and peers), through personal attitudes and subjective norms, influenced students' decision to avoid the accounting profession. The findings suggest that accounting departments and business school faculties should recruit professional accountants and invite Swedish professional accounting bodies to create supportive activities that will motivate and help students learn more about the profession. Furthermore, accounting teachers should be more practical and equipped with engaging pedagogical techniques, and mandatory internships and seminars should be included in the school curriculum. It is also suggested that these implications should be positively communicated through social media.

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## 1. Introduction

In Sweden, students commonly become professional accountants by choosing a major in Business Administration, with accounting as a specialization. This qualification is part of a Bachelor's program in Business and Economics (180 credits or 240 credits) or a Bachelor's program in Business Administration (180 credits), which solely comprises mandatory courses in the subject (Stockholms Universitet, 2019). These programs prepare students for economics-oriented fields such as accounting and auditing (Göteborgs Universitet, 2019; Karlstads Universitet, 2019; Uppsala Universitet, 2019a, 2019b; Stockholms Universitet, 2019). The programs, offered in most Swedish Universities have similar structures with general courses featuring in the early semesters and specialization via majors in the later semesters (Göteborgs Universitet, 2019; Karlstads Universitet, 2019; Umeå Universitet, 2019; Uppsala Universitet, 2019a). On completion, graduates may pursue a postgraduate course (Göteborgs Universitet, 2019; Stockholms Universitet, 2019; Uppsala Universitet, 2019a) or proceed directly to professional employment on their journey towards an accounting authorization.

There are two accounting bodies that authorize accountants in Sweden: the Professional Institute of Authorized Public Accountants (FAR) and the Swedish Association of Accounting Consultants (SRF Konsulterna). Authorization enhances the accountant's expertise and experience because an authorized accounting consultant undertakes continuous education on

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new accounting rules and encourages client safety (FAR, 2018; SRF, 2018). The FAR members use the Swedish Standard for Accounting Services (REKO) (FAR, 2018), while the Swedish Standard for Accounting Missions (REX) is used by the members of SRF Konsulterna (SRF, 2018).

Despite such a well-organized career path, it has been acknowledged that the Swedish labor market faces a shortage of accounting professionals (Arbetsförmedlingen, 2018; Civilekonomerna, 2016; Ekelund, 2016; Hays, 2017; Konsulten, 2019; Livingston, 2017; Vikström, 2017). The deficiency was emphasized by Hays (2017), who showed that, with the particular lack of accounting professionals and specialists, finance ranked the fourth worst among occupations in terms of labor paucity (Ekelund, 2016). Additionally, a survey by the Swedish trade union Civilekonomerna indicated a 20% increase in the demand for accountants compared to other business administration fields (Civilekonomerna, 2016) and forecasted it to remain high until at least 2023 (SACO, 2018). Accounting firms have also expressed concern about the increasing demand for accountants (Deloitte, 2017; EY, 2017), noting that the global workforce includes 6% contract workers and predicting an increase in the number over the years (EY, 2017).

The decreasing number of students majoring and completing their degrees in accounting is, arguably, one reason for the shortage of accountants (Civilekonomerna, 2019). This is an issue that has been highlighted in the literature at the international level (Adams et al., 1994; Mauldin et al., 2000; Tan & Laswad, 2006). The decline is also related to the quantitative nature of accounting (Allen, 2004). The accounting profession has also suffered from corporate scandals (Ali et al., 2008; Said et al., 2004) such as Enron and Arthur Andersen that may have tarnished its reputation (Said et al., 2004). Given the current level of globalization and evolving capital markets, shortage of accountants can be addressed by attracting more students to the profession (Jackling & Keneley, 2009; Law, 2010).

This study uses the simplified Theory of Reasoned Action (TRA), elaborated upon by Felton et al. (1995), to investigate the beliefs influencing students' attitudes and subjective norms that turn them away from the accounting profession. The TRA model has been frequently used in other fields, such as engineering (Paimin et al., 2016), marketing (Memarzadeh et al., 2017; Pookulangara et al., 2017), medicine (Albarracin et al., 2001; Bogart et al., 2000; Bosompra, 2001; Liou, 2009; Sable et al., 2006), and some business majors (Kumar & Kumar, 2013), demonstrating its relevance and reliability. However, relatively few studies have used the TRA to investigate beliefs in Sweden. The most recent research was conducted in the 1990s (Granberg & Holmberg, 1990; Gärling et al., 1998); thus, an up-to-date study using the TRA in the Swedish context is relevant. Furthermore, previous studies have shown a definite positive correlation between behavioral beliefs, normative beliefs, and intentions concerning the profession among students (Jackling & Keneley, 2009). Therefore, examining such beliefs is essential in understanding why students do not choose to continue in the accounting field. The simplified TRA has been shown to effectively recognize the beliefs and attitudes influencing students' career paths in the accounting field (Felton et al., 1995; Jackling et al., 2012; Jackling & Keneley, 2009; Law, 2010). Thus, using the simplified TRA, essential factors affecting career choice will be identified. This will provide relevant insights into encouraging students to choose the profession and consequently decreasing the accounting professionals deficit (Jackling et al., 2012) in Sweden.

This study addresses the shortage of accounting professionals in Sweden. It will do so by looking into how accounting departments and business school faculties can motivate students and encourage them to choose a career in accounting. The following research questions will be investigated: 1) Which behavioral beliefs are correlated with students' attitudes that result in them not choosing the accounting profession? 2) Which normative beliefs are correlated with students' subjective norms that result in them not choosing the accounting profession?

## 2. Theory

### 2.1. Student beliefs about the accounting profession

Understanding student beliefs toward the accounting profession may be challenging since students entering tertiary education have unique life experiences and different socio-economic and educational backgrounds that influence their career choice beliefs (Jackling & Calero, 2006). Significantly increasing the complexity is that career choice requires students to consider all possible outcomes of their decisions, including their own beliefs and the surrounding environment's reactions (Jackling & Keneley, 2009). Nonetheless, while entering university, many may already be convinced about what an accounting career implies (Marriott & Marriott, 2003), often based on adverse stereotypical perceptions toward accounting (Cory, 1992; Mladenovic, 2000). This demonstrates not only that students' beliefs toward the profession may be pre-determined but also that the accounting profession might be facing an image problem (Allen, 2004; Coetzee & Oberholzer, 2010; Cohen & Hanno, 1993; Cory, 1992; Jackling & Keneley, 2009; Law, 2010). For instance, accountants have been viewed as number-crunching individuals (Jackling & Calero, 2006; Jackling et al., 2012) who lack social interaction skills and perform repetitive tasks (Cory, 1992). Such negative views may precipitate adverse beliefs among students and, consequently, result in them not choosing the profession.

### 2.2. Theory of Reasoned Action as a model

Various models, such as social cognitive career theory (Ng et al., 2017) and the theory of planned behavior (Tan & Laswad, 2006, 2009; Wen, Yang, Bu, Diers, & Wang, 2018), have been employed in previous studies to investigate students' beliefs

and intentions regarding the accounting profession. The unique quality of the TRA, developed by Fishbein and Ajzen (1975), is that it offers a solid framework that allows the measurement, conceptualization, and identification of the components influencing human behavior and demonstrates causation that unites beliefs with the motivation to act in a specific manner (Montaño & Kasprzyk, 2008). This social psychology model presumes that behavioral intention constitutes an individual's attitude toward a behavior (personal influence) and the subjective norms (social influence) encircling the execution of that behavior (Fishbein & Ajzen, 1975). An attitude refers to an individual's feelings (positive or negative) toward performing a behavior (Law, 2010). Subjective norms, meanwhile, are defined as "the person's perception that most people who are important to him think he should or should not perform the behaviour in question" (Fishbein & Ajzen, 1975, p. 302). The TRA further demonstrates that the personal attitude toward a behavior is determined by behavioral beliefs, while the subjective norms are determined by normative beliefs (Fishbein & Ajzen, 1975). These behavioral beliefs are defined as "beliefs that behavioural performance is associated with certain attribute or outcomes" (Montaño & Kasprzyk, 2008, p. 74). Therefore, the fundamental supposition for behavioral beliefs is that an action, such as a career choice, will result in specific consequences (Jackling & Keneley, 2009). The decision to choose a particular career path may also be influenced by the experiences and viewpoints of others, known as normative beliefs (Jackling & Keneley, 2009), which refer to "beliefs about whether each referent approves or disapproves of the behaviour" (Montaño & Kasprzyk, 2008, p. 74). When students make a choice regarding the accounting profession, behavioral beliefs and normative beliefs matter since they determine the intention to take a certain course of action (Jackling & Keneley, 2009).

### 2.3. The simplified TRA as a model applied to the accounting profession

The TRA model was first used in the accounting context by Cohen and Hanno (1993), who investigated the decision to major in the field by including another variable expressed as behavioral control. Two years later, the simplified TRA model was applied by Felton et al. (1995) to examine the intentions and attitudes toward becoming a professional accountant. This was followed by other scholars who applied this version to the accounting field. For instance, it has been applied in investigating the factors influencing the supply of accounting graduates in Australia (Jackling & Keneley, 2009) and examining accounting students' career decisions in public accounting practices after the Enron scandal (Law, 2010). It has also been used to examine differences between international and Australian students regarding the underlying intentions toward accounting (Jackling et al., 2012).

The current study, therefore, relies upon the simplified TRA model adapted from Felton et al. (1995) since it has been widely successful, valuable, and acknowledged in accounting literature (Felton et al., 1995; Jackling et al., 2012; Jackling & Keneley, 2009; Law, 2010). As the model demonstrates below, students' intentions regarding a future career will depend on their attitudes and subjective norms (Fig. 1).

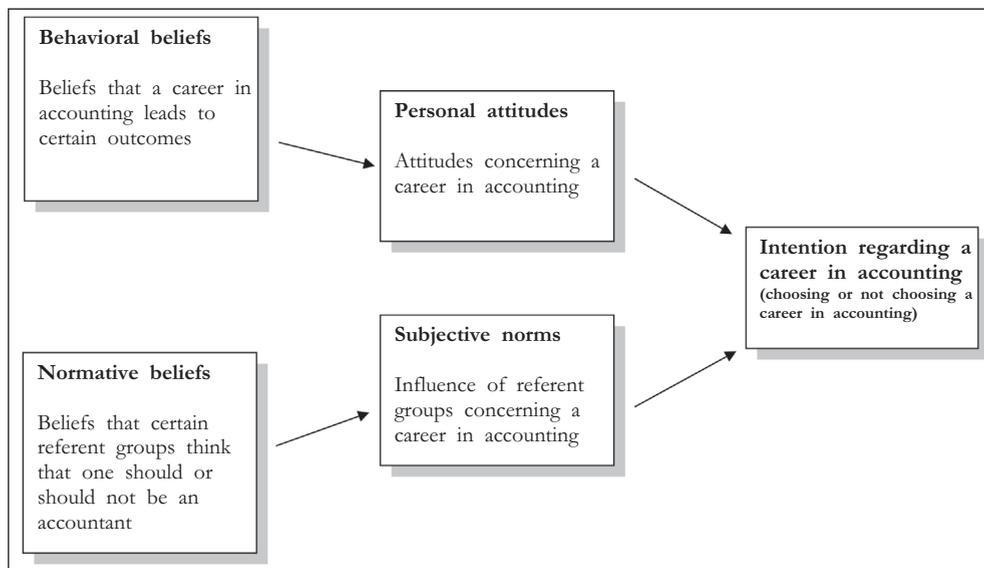


Fig. 1. The simplified TRA model adapted to student intentions concerning a career in accounting (Felton et al., 1995).

#### 2.3.1. Behavioral beliefs

It has been demonstrated that personal attitudes regarding the accounting profession are dictated by various beliefs that can be divided into intrinsic and extrinsic components (Jackling & Calero, 2006; Jackling & Keneley, 2009). Prior research that has adopted the simplified TRA in an accounting context has demonstrated that these components significantly determine

the students' behavioral beliefs concerning this profession (Felton et al., 1995; Jackling et al., 2012; Jackling & Keneley, 2009; Law, 2010).

#### (a) Intrinsic components

Intrinsic components are related to personal satisfaction, identified by carrying out a specific activity (Jackling & Keneley, 2009; Law, 2010). These components are not affected by external matters such as pressures and rewards from referents (Ng et al., 2017). The primary intrinsic components influencing students' beliefs about the accounting profession include personal interest in accounting, numerical inability, and the belief that an accounting career is tedious and boring (Cohen & Hanno, 1993; Geiger & Ogilby, 2000; Jackling & Calero, 2006; Jackling & Keneley, 2009; Saemann & Crooker, 1999).

As per the abovementioned first intrinsic component, students who find accounting interesting will adopt a positive attitude toward the profession (McDowall & Jackling, 2010) and are more likely to major in it and, subsequently, choose an accounting career (Saemann & Crooker, 1999; Said et al., 2004; Uyar et al., 2011). However, it has also been demonstrated that students believe the accounting profession to be boring (Byrne & Willis, 2005; Cohen & Hanno, 1993; Wells, 2015) and stressful due to pressure owing to deadlines (Germanou et al., 2009). As shown by Geiger and Ogilby (2000), both accounting and non-accounting students might find the subject area more boring toward the end of the accounting courses than at the beginning. Therefore, it is reasonable to assume that their interest in the field decreases as they advance toward their degrees (Marriott & Marriott, 2003). Furthermore, some students do not feel self-confident regarding their capacity to deal with the accounting course content and examination (Byrne & Flood, 2005). This indicates that they are less likely to find the field attractive if they believe that the profession requires high numerical skills (Jackling & Calero, 2006). Their actual or self-perceived numerical capacities might therefore impact their choice of the accounting profession (Cohen & Hanno, 1993; Uyar et al., 2011).

#### (b) Extrinsic components

Extrinsic components pertain to an activity being performed to accomplish a distinguishable outcome. These components can be expressed as the perceived outcomes and rewards students think will result from majoring in or choosing an accounting career (Jackling & Keneley, 2009). Previous studies have demonstrated that the extrinsic components influencing students' career choices in accounting include salary scale and job opportunities (Ahmed et al., 1997; Felton et al., 1994; Jackling & Keneley, 2009; Hutaibat, 2012; Said et al., 2004; Samsuri et al., 2016).

Past research has shown that future income critically influences accounting students' choice of field (Auyeung & Sands, 1997; Felton et al., 1994; Lowe & Simons, 1997; Mauldin et al., 2000; Tan & Laswad, 2006), while other scholars have found that salary does not have any impact on students' career choices (Jackling et al., 2012; Uyar et al., 2011). It has also been shown that the students' interest in the accounting field might be adversely influenced by the perceived availability of job opportunities (Hutaibat, 2012). For instance, Uyar et al. (2011) argued that good job prospects in accounting might influence students' career choice since they emphasize job opportunities while selecting a career path (Ahmed et al., 1997; Felton et al., 1994; Hutaibat, 2012; Samsuri et al., 2016). Further, Paolillo and Estes (1982) asserted that job opportunities are the most critical factor impacting students' career choices.

### 2.4. Normative beliefs

Students' intention to major in accounting might be influenced by the expected reaction of important referent groups (Geiger & Ogilby, 2000; Jackling & Keneley, 2009; Mauldin et al., 2000; Paolillo & Estes, 1982; Tan & Laswad, 2006). Some such referent groups include peers (Jackling & Keneley, 2009), parents (Auyeung & Sands, 1997; Cohen & Hanno, 1993; Dandy & Nettelbeck, 2002; Pearson & Dellman-Jenkins, 1997; Jackling & Keneley, 2009; Jackling et al., 2012; Tan & Laswad, 2006), and teachers (Byrne & Flood, 2005; Byrne & Willis, 2005; Mauldin et al., 2000; Paolillo & Estes, 1982). However, Lowe and Simons (1997) found that referent groups (teachers, parents, and peers) had the weakest impact on students' major choices, while Sugahara and Boland (2006) observed that the impact of teachers on the choice of accounting as a major is relatively weak compared to that of other referents.

### 2.5. Development of hypotheses

As shown in the theoretical framework, behavioral beliefs are dictated by intrinsic and extrinsic components (Felton et al., 1995; Jackling et al., 2012; Jackling & Keneley, 2009; Law, 2010). This study expands upon this literature with the simplified TRA model and the intrinsic and extrinsic components highlighted in prior research since most existing literature (Adams et al., 1994; Ahmed et al., 1997; Auyeung & Sands, 1997; Byrne et al., 2012; Byrne & Flood, 2005; Byrne & Willis, 2005; Coetzee & Oberholzer, 2010; Dalci & Özyapici, 2018; Felton et al., 1994; Jackling & Calero, 2006; Marriott & Marriott, 2003; Paolillo & Estes, 1982; Said et al., 2004; Uyar et al., 2011; Wells, 2015) has mainly concentrated on these components without considering a legitimate theoretical model. The simplified TRA assumes that personal attitudes are directly affected by behavioral beliefs, which implies that a person who believes that negative outcomes will result from a particular behavior will have an adverse attitude concerning that behavior (Montaño & Kasprzyk, 2008).

Students' normative beliefs (influences from parents, peers, and teachers) also influence their choice of the accounting profession (Jackling & Keneley, 2009; Law, 2010). As indicated by the simplified TRA model, these beliefs regulate subjective norms. An individual's perception that important referents believe that they should not fulfill a specific behavior will, therefore, have adverse subjective norms toward it (Montaño & Kasprzyk, 2008). The key variables recognized for determining behavioral and normative beliefs are shown in Fig. 2.

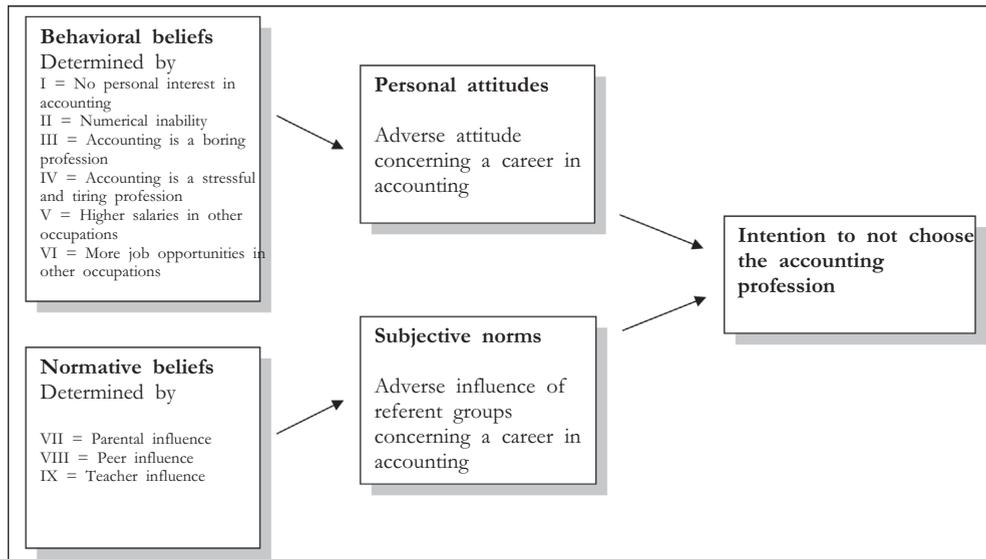


Fig. 2. The simplified TRA model used to elaborate the intention to not choose the accounting profession.

With regard to these variables, the following hypotheses were tested.

**H1.** Behavioral beliefs. At least one variable determining behavioral beliefs significantly influences students' adverse attitudes that lead them to not choose the accounting profession.

**H2.** Normative beliefs. At least one variable determining normative beliefs significantly influences students' adverse subjective norms that lead them to not choose the accounting profession.

For both hypotheses, the researchers expect positive relationships.

### 3. Materials and methods

#### 3.1. Data collection

Primary data were gathered using questionnaires sent via email to first-year and second-year university students in Sweden. This technique was used since it suited the study's aims (Gray, 2017), and previous research that had adopted the simplified TRA in an accounting setting also used questionnaires (Jackling et al., 2012; Jackling & Keneley, 2009; Law, 2010). Overall, this strategy has generally been recommended for studies using the TRA (Montaño & Kasprzyk, 2008). In total, 323 replies were collected, a satisfactory size for establishing a sample's accuracy (Bryman & Bell, 2011).

##### 3.1.1. Questionnaire

The questionnaire (summarized in Table 1) was divided into four sections: demographic information (questions 1–2), academic information (questions 3–5), behavioral beliefs and adverse attitudes about accounting (questions 6–12), and normative beliefs along with adverse subjective norms about accounting (questions 13–16). It should be noted that sections three and four (questions 6–16) provided statements focusing on the negative intention to choose the accounting profession. The complete questionnaire is provided in Appendix A.

**Table 1**  
Questionnaire overview.

Question	Question type	Variable	Number of response alternatives	Scale
<b>Questions 1–2</b>	Demographic information	---	Gender: two alternatives Age: five alternatives	Multiple choice
<b>Questions 3–5</b>	Academic information	---	University: five alternatives Current term: five alternatives Field of major: four alternatives	Multiple choice
<b>Questions 6–11</b>	Behavioral beliefs regarding not choosing the accounting profession	Independent variables	Five alternatives + "I do not know" alternative	5-point Likert scale
<b>Question 12</b>	Adverse attitudes concerning the accounting profession	Dependent variable*	Five alternatives + "I do not know" alternative	5-point Likert scale
<b>Questions 13–15</b>	Normative beliefs regarding not choosing the accounting profession	Independent variables	Five alternatives + "I do not know" alternative	5-point Likert scale
<b>Question 16</b>	Adverse subjective norms concerning the accounting profession	Dependent variable*	Five alternatives + "I do not know" alternative	5-point Likert scale

\* Dependent variables ( $y_1$  and  $y_2$ ) in [step 1](#) of the data analysis.

Before the questionnaire was sent to the students, it was directly translated ([Usunier, 1998](#)) into Swedish to increase the questions' understandability and replies' validity, since the respondents were allowed to reply in their native language. This required further methodological considerations ([Saunders et al., 2009](#)), and the researchers considered the disadvantages of translation, such as different meanings or other discrepancies ([Usunier, 1998](#)). In particular, the belief constructs were difficult to translate to Swedish while retaining their experimental meaning, and some issues also arose when translating the meaning of *stressful and tiring*, one of the behavioral beliefs. Otherwise, translation was relatively easy because the experimental meanings of different words and concepts are similar between English and Swedish. To ensure that the questions were translated satisfactorily, a pilot test was executed with four students who were part of the target population.

### 3.1.2. Participants

Accounting is a specialization within the business administration branch in Swedish universities ([Göteborgs Universitet, 2019](#); [Karlstads Universitet, 2019](#); [Umeå Universitet, 2019](#)); therefore, students who want to become professional accountants usually select business administration as their major. Consequently, it was imperative to obtain a sample of first-year and second-year students who intended to choose this major since this group represents the country's future accountants. Their beliefs concerning the accounting profession were also expected to be more robust since they had not chosen a major yet. Using the convenience sampling technique ([Gray, 2017](#); [Saunders et al., 2009](#)), first-year and second-year students in the programs from the following five Swedish universities were selected:

- **Karlstad University** (Bachelor's program in Business and Economics, 240 credits)
- **Umeå University** (Bachelor's program in Business and Economics, 240 credits)
- **Uppsala University** (Bachelor's program in Business and Economics, 180 credits)
- **Stockholm University** (Bachelor's program in Business Administration, 180 credits)
- **Gothenburg University** (Bachelor's program in Business and Economics – Analytical Orientation, 180 credits)

At Stockholm University, the students only take on Business Administration courses ([Stockholms Universitet, 2019](#)). Nonetheless, some students at this university mistakenly replied that they intended to choose economics, while others replied that they intended to choose other fields or did not know what major to choose. Question five was meant to be a filter ([Gray, 2017](#); [Saunders et al., 2009](#)) to identify and exclude students at the five universities who did not intend to choose business administration as a major. After this adjustment, the actual sample size was 228 students ( $n = 228$ ). Thus, the researchers had more control of the primary target sample. The Bachelor's programs (180 credits and 240 credits) offered at Swedish Universities are usually similar during the first year of education ([Göteborgs Universitet, 2019](#); [Karlstads Universitet 2019](#); [Umeå Universitet 2019](#); [Uppsala Universitet 2019a](#)). It is therefore argued that the student cohorts are reasonably homogeneous.

The study's materials and methods, presentation of the results, and the management of participants' details were all approved in an ethical review by the researchers' institution. The paper was also sent to and approved by the other four institutions involved in this research before its submission for publication. In this regard, obtaining approval from the institutions involved in this research ([Bryman et al., 2011](#); [Gray, 2017](#); [Saunders et al., 2009](#)) was satisfactorily undertaken.

### 3.2. Data analysis

The collected data were analyzed using multiple regression analysis, conducted in two steps. Before the analysis, the response alternative *I do not know* was re-coded through neutral imputation, equivalent to a value of 3 on a 5-point Likert

scale. Also, Cronbach's alpha was calculated using a scale between 0 (no internal reliability) and 1 (perfect internal reliability) (Gray, 2017). The test value of 0.792 indicated that the internal reliability was acceptable, at  $\alpha > 0.7$  (Gray, 2017).

In Step 1 of the analysis, the adverse attitude and adverse subjective norms concerning the accounting profession were operationalized as the initial dependent variables ( $y_1$  and  $y_2$ ). The independent variables were behavioral beliefs ( $x_1 - x_6$ ) and normative beliefs ( $x_7 - x_9$ ). The equations for the multiple regressions were expressed as follows:

$$y_1 = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \beta_6x_6 + \varepsilon \quad \varepsilon \sim N(0, \sigma^2)$$

$$y_2 = \beta_0 + \beta_1x_7 + \beta_2x_8 + \beta_3x_9 + \varepsilon \quad \varepsilon \sim N(0, \sigma^2)$$

$y_1$  = Adverse attitudes concerning the accounting profession

$y_2$  = Adverse subjective norms concerning the accounting profession

$x_1$  = No personal interest in accounting

$x_2$  = More job opportunities in other occupations

$x_3$  = Numerical inability

$x_4$  = Accounting is a boring profession

$x_5$  = Accounting is a stressful and tiring profession

$x_6$  = Higher salaries in other occupations

$x_7$  = Parental influence

$x_8$  = Peer influence

$x_9$  = Teacher influence

$\beta_0$  = Regression coefficient

$\beta_1 \dots \beta_6$  = Regression coefficients for  $x_1 \dots x_6$

In Step 2, predicting students' intention not to choose the accounting profession was operationalized as the dependent variable. This variable ( $y_3$ ) was constructed based on the standardized predicted values for adverse attitudes and adverse subjective norms. The multiple regression equation was therefore expressed as follows:

$$y_3 = \beta_0 + \beta_1x_1 + \beta_2x_2 + \varepsilon \quad \varepsilon \sim N(0, \sigma^2)$$

$y_3$  = Intention not to choose the accounting profession

$x_1$  = Adverse attitude (standardized predicted value)

$x_2$  = Adverse subjective norms (standardized predicted value)

$\beta_0$  = Regression coefficient

$\beta_1 \dots \beta_2$  = Regression coefficients for  $x_1$  and  $x_2$

To ensure quality in the multiple regression analysis, the assumptions for the random component ( $\varepsilon$ ) were tested through residual analysis, in which heteroscedasticity (non-constant variance) and non-normality were detected in the residuals for adverse subjective norms. Therefore, the dependent variable, *adverse subjective norms concerning the accounting profession* ( $y_2$ ), was transformed using the square root values of the variable ( $\sqrt{y_2}$ ) as an input for the analysis. Likewise, multicollinearity was tested using the variance inflation factor (VIF) and was revealed to be absent in the multiple regression analysis since all VIF values were  $< 10$ .

## 4. Results

### 4.1. Descriptive statistics

As shown in Table 2, the highest number of responses was from students aged between 21 and 26 years old (57.9% of the sample). This was expected since younger people usually constitute the majority of the people studying at the university level.

The descriptive statistics also reveal that 61.4% of the sample represented students from Uppsala University (34.6%) and Stockholm University (26.8%). This indicates a small unequal distribution since two of the five universities together represent a ratio  $> 50\%$  of the sample. However, the student cohorts are still representative as one single sample since the educational structure of the Bachelor's programs is similar (see discussion under Section 3.1.2).

With regard to the main target (first-year and second-year students), it was also expected that most of the students would be in semester 1–4 (94.7%) and that the group of students who could be studying in *other semesters* would be small (5.3%) in comparison. A large proportion (44.3%) of the students were in their second semester. However, this group of students is still in the target group, and, therefore, there was no issue with over-representation in this category.

**Table 2**  
Descriptive statistics.

		Frequency	Percent	Valid percent	Cumulative percent
<b>Gender</b>	Female	136	59.6	59.6	59.6
	Male	92	40.4	40.4	100.0
	<b>Total</b>	<b>228</b>	<b>100.0</b>	<b>100.0</b>	
<b>Age</b>	15–20	71	31.1	31.1	31.1
	21–26	132	57.9	57.9	89.0
	27–32	17	7.5	7.5	96.5
	33–38	4	1.8	1.8	98.2
	Above 38	4	1.8	1.8	100.0
	<b>Total</b>	<b>228</b>	<b>100.0</b>	<b>100.0</b>	
<b>University</b>	Stockholm University	61	26.8	26.8	26.8
	Uppsala University	79	34.6	34.6	61.4
	Gothenburg University	14	6.1	6.1	67.5
	Umeå University	43	18.9	18.9	86.4
	Karlstad University	31	13.6	13.6	100.0
	<b>Total</b>	<b>228</b>	<b>100.0</b>	<b>100.0</b>	
<b>Current semester</b>	Semester 1	36	15.8	15.8	15.8
	Semester 2	101	44.3	44.3	60.1
	Semester 3	30	13.2	13.2	73.2
	Semester 4	49	21.5	21.5	94.7
	Other Semesters	12	5.3	5.3	100.0
	<b>Total</b>	<b>228</b>	<b>100.0</b>	<b>100.0</b>	

## 4.2. Multiple regression analysis

### 4.2.1. Behavioral beliefs and adverse attitudes

The adjusted  $R^2$  value shows that the independent variables determining behavioral beliefs (see Table B.1, Appendix B) explained 59% of the total sample variation in the adverse attitudes concerning the accounting profession ( $y_1$ ). The analysis of variance for behavioral beliefs (see Table B.2, Appendix B) showed that the overall  $F$ -test ( $F = 55.459, p = 0.000$ ) was highly significant since  $p < 0.01$ , indicating that the model accurately predicted adverse attitudes concerning the accounting profession.

The  $t$ -tests of the independent variables determining behavioral beliefs (see Table 3) demonstrated that *higher salaries in other occupations* ( $t = 2.487, p = 0.014$ ) were significant since  $p < 0.05$ . Moreover, the  $t$ -tests also demonstrated that *no personal interest in accounting* ( $t = 3.850, p = 0.000$ ) and *accounting is a boring profession* ( $t = 7.655, p = 0.000$ ) were highly significant since both variables had  $p$ -values  $< 0.01$ .

**Table 3**  
Coefficients of independent variables determining behavioral beliefs.

Coefficients <sup>a</sup>		Unstandardized coefficients		Standardized coefficients	$t$	Sig.
Model		B	Std. Error	$\beta$		
1	(Constant)	-0.014	0.191		-0.075	0.940
	No personal interest in accounting	0.241	0.063	0.264	3.850	<b>0.000**</b>
	More job opportunities in other occupations	-0.016	0.055	-0.015	-0.289	0.773
	Numerical inability	-0.037	0.064	-0.028	-0.582	0.561
	Accounting is a boring profession	0.453	0.059	0.508	7.655	<b>0.000**</b>
	Accounting is a stressful and tiring profession	0.061	0.060	0.046	1.006	0.316
	Higher salaries in other occupations	0.140	0.056	0.128	2.487	<b>0.014*</b>

Significance threshold of 0.05 ( $p = 0.05$ ).

<sup>a</sup> Dependent Variable: Adverse attitudes concerning the accounting profession.

The non-significant variables were eliminated from the variables used to predict adverse attitudes concerning the accounting profession, and the resulting regression model was as follows:

$$y_1 = \beta_0 + \beta_1 x_1 + \beta_2 x_4 + \beta_3 x_6 + \varepsilon \quad \varepsilon \sim N(0, \sigma^2)$$

$$y_1 = -0.014 + 0.241x_1 + 0.453x_4 + 0.140x_6$$

$y_1$  = Adverse attitude concerning the accounting profession

$x_1$  = No personal interest in accounting

$x_4$  = Accounting is a boring profession

$x_6$  = Higher salaries in other occupations

$\beta_0 = -0.014$

$\beta_1 = 0.241, \beta_2 = 0.453, \text{ and } \beta_3 = 0.140$  are regression coefficients for  $x_1, x_4, \text{ and } x_6$ , respectively

#### 4.2.2. Normative beliefs and adverse subjective norms

The adjusted  $R^2$  value for normative beliefs (see Table C.1, Appendix C) indicated that 22.9% of the total sample variation in the adverse subjective norms concerning the accounting profession ( $y_2$ ) was explained by the independent variables determining normative beliefs. With regard to the analysis of variance for normative beliefs (see Table C.2, Appendix C), the overall  $F$ -test ( $F = 23.486$ ,  $p = 0.000$ ) was highly significant, since  $p < 0.01$ , which indicated that the model accurately predicted the adverse subjective norms for the accounting profession.

As shown in Table 4, the  $t$ -tests of the independent variables determining normative beliefs revealed that *peer influence* ( $t = 5.176$ ,  $p = 0.000$ ) and *teacher influence* ( $t = 2.881$ ,  $p = 0.004$ ) were statistically highly significant because both variables had  $p$ -values  $< 0.01$ .

**Table 4**  
Coefficients of independent variables determining normative beliefs.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	$\beta$		
1	(Constant)	1.104	0.047		23.551	0.000
	Parental influence	-0.006	0.028	-0.015	-0.203	0.839
	Peer influence	0.132	0.025	0.374	5.176	<b>0.000**</b>
	Teacher influence	0.075	0.026	0.200	2.881	<b>0.004**</b>

Significance threshold of 0.05 ( $p = 0.05$ ).

<sup>a</sup> Dependent Variable: Adverse subjective norms concerning the accounting profession.

<sup>b</sup> The dependent variable is transformed  $y_2 = \sqrt{y_2}$ .

The non-significant variable was, therefore, excluded from the regression model since it was not functional in predicting adverse subjective norms concerning the accounting profession. The following regression model was presented:

$$y_2 = \beta_0 + \beta_1 x_8 + \beta_2 x_9 + \varepsilon \quad \varepsilon \sim N(0, \sigma^2)$$

$$y_2 = 1.104 + 0.132x_8 + 0.075x_9$$

$y_2$  = Adverse subjective norms concerning the accounting profession

$x_8$  = Peer influence

$x_9$  = Teacher influence

$\beta_0 = 1.104$

$\beta_1 = 0.132$  and  $\beta_2 = 0.075$  are regression coefficients for  $x_8$  and  $x_9$  respectively

#### 4.2.3. Predicting students' intentions to not choose the accounting profession

In Step 2 of the multiple regression analysis, the adjusted  $R^2$  value (see Table D.1, Appendix D) indicated that the standardized predicted values for adverse attitudes and adverse subjective norms explained 60.9% of the total sample variation in the intention to not choose the accounting profession ( $y_3$ ). With regard to the analysis of variance (see Table D.2, Appendix D), the overall  $F$ -test ( $F = 177.809$ ,  $p = 0.000$ ) was highly significant since  $p < 0.01$ , which indicated that the model appropriately predicted the intention to not choose the accounting profession.

Table 5 shows that the variable *adverse subjective norms* ( $t = 2.593$ ,  $p = 0.010$ ) was significant because  $p < 0.05$ . Regarding *adverse attitude* ( $t = 18.369$ ,  $p = 0.000$ ), it was shown that the variable was highly significant since  $p < 0.01$ .

**Table 5**  
Coefficients of independent variables predicting students' intentions to not choose the accounting profession.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	$\beta$		
1	(Constant)	2.447	0.055		44.172	0.000
	Adverse attitude (Standardized predicted value)	1.024	0.056	0.765	18.369	<b>0.000**</b>
	Adverse subjective norms (Standardized predicted value) <sup>b</sup>	0.145	0.056	0.108	2.593	<b>0.010*</b>

Significance threshold of 0.05 ( $p = 0.05$ ).

<sup>a</sup> Dependent Variable: Intention to not choose the accounting profession.

<sup>b</sup> The standardized predicted value for adverse subjective norms is based on the transformed  $y_2 = \sqrt{y_2}$ .

This output suggested that adverse attitudes and adverse subjective norms accurately predicted the intention to not choose the accounting profession; therefore, the following regression equation for Step 2 was presented:

$$y_3 = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \varepsilon \quad \varepsilon \sim N(0, \sigma^2)$$

$$y_3 = 2.447 + 1.024x_1 + 0.145x_2$$

$y_3$  = Intention not to choose the accounting profession

$x_1$  = Adverse attitude (standardized predicted value)

$x_2$  = Adverse subjective norms (standardized predicted value)

$\beta_0$  = 2.447

$\beta_1$  = 1.024 and  $\beta_2$  = 0.145 are regression coefficients for  $x_1$  and  $x_2$  respectively

#### 4.3. Testing of hypotheses

The multiple regression analysis provides support that the two hypotheses ( $H_1$  and  $H_2$ ) were supported.  $H_1$  was supported since three of the variables influencing behavioral beliefs significantly influenced students' adverse attitudes toward choosing the accounting profession.  $H_2$  was supported because two of the variables influencing normative beliefs significantly influenced the students' adverse subjective norms toward choosing an accounting career.

### 5. Discussion

This study's findings support the simplified TRA model's constructs since some of the variables determining behavioral and normative beliefs were significant in predicting the students' adverse attitudes and subjective norms concerning the accounting profession. Similarly, the model's two constructs for adverse attitudes and adverse subjective norms produced significant, independent contributions in predicting students' intentions to not choose the accounting profession.

#### 5.1. Behavioral beliefs

The results revealed that *no personal interest in accounting*, *accounting is a boring profession*, and *higher salaries in other occupations* were the most significant variables in predicting students' negative attitudes toward choosing the accounting profession. This outcome corresponds with the findings of various studies (Cohen & Hanno, 1993; Felton et al., 1995; Geiger & Ogilby, 2000; Jackling & Calero, 2006; Lowe & Simons, 1997; Tan & Laswad, 2006; Wells, 2015).

As Jackling and Calero (2006) stated, students who have a personal interest in accounting will more likely choose a career in the profession compared to students with no personal interest in the field, indicating that the latter group of students will probably have adverse attitudes concerning the accounting profession and will not choose it. Moreover, the students' belief that accounting is boring confirms previous findings that this belief is essential in determining students' intention to major in the field (Cohen & Hanno, 1993; Geiger & Ogilby, 2000). It implies that students perceive accounting adversely (Wells, 2015) and will most certainly not choose it. To reduce the deficiency of accountants in Sweden, it is therefore important to involve not only professional accounting bodies (Jackling & Calero, 2006; Jackling & Keneley, 2009; Ng et al., 2017; Said et al., 2004) but also professional accountants. With working life experience, professionals possess relevant tools to revitalize students' interest in accounting, increasing their likelihood of choosing this career (Coetzee & Oberholzer, 2010). This is likely because such professionals come with real-life examples and success stories (Uyar et al., 2011) that can be shared with the students through workshops (Cory, 1992; Law, 2010). These workshops should focus on practical activities with real scenarios concerning everyday tasks and situations that accountants face to give students valuable insights into the profession. This may, in turn, encourage students to choose the profession (Said et al., 2004) or increase their interest in the field (Ng et al., 2017). For instance, exposing students to different management information systems common in the field is one activity that can be conducted during workshops.

Similarly, internships and seminars will also matter since they will provide students with additional insights into the field (Ali et al., 2008) while also creating a useful link between education and professional life (Uyar et al., 2011). It is also emphasized that professional accounting bodies should provide guest lectures that can further increase students' interest in the field (Ng et al., 2017). These kinds of interventions will also address students' belief that accounting is boring since they are more likely to think about the subject differently and choose it as a major and will consequently launch a career (Allen, 2004; Said et al., 2004; Adams et al., 1994; Coetzee & Oberholzer, 2010; Mauldin et al., 2000; Tan & Laswad, 2006). However, to have the most desired impact, it will still be important that students receive regular support and guidance during these activities: that is why mentorship is recommended as a complementary element. Mentorship enables a closer link between the student and the professional, through which the student's adverse beliefs can be understood and discussed in depth at a personal level. In this regard, students should be assigned a professional accounting mentor during the early part of their education.

Further, workshops and guest lectures should also include activities and discussions in which the salary component will be communicated to students (Felton et al., 1995). This is important since students may be ignorant about the current salaries in the profession. As Felton et al. (1995) revealed, a high salary is the most crucial factor determining a specific career

path. Therefore, such activities and discussions are important since professional accounting bodies have opportunities to foster the development of salaries in the profession. It is also reasonable to believe that accounting salaries, to some extent, can be highlighted through internships and seminars since it allows students to interact with professionals who have knowledge regarding income opportunities. In this way, students may be encouraged to choose a career in accounting despite the belief that other occupations (e.g., management or marketing) will offer higher salaries, further mitigating the shortfall of accounting professionals.

Regarding the variables on behavioral beliefs, it is also reasonable to believe that some students with an adverse attitude toward accounting may still enter the profession since, for them, its positive factors may outweigh the negative ones. For instance, some students might consider the accounting profession's salary satisfactory; thus, adverse attitudes due to other higher-paying jobs (or due to no personal interest in accounting or boring profession) would not be relevant. Likewise, some students might consider accounting to be an occupation associated with status/power, which may encourage them to enter the field even if they have a negative attitude towards it. The deficiency of accounting professionals in Sweden means there are still extensive employment opportunities. Therefore, some students who hold a negative attitude may enter the profession either way because they are aware of the situation. This would also explain why more job opportunities in other occupations were not significant in this study.

The findings further revealed that *numerical inability* and *accounting is a stressful and tiring profession* did not have a significant influence on the students' adverse attitudes. These findings are similar to that of [Uyar et al. \(2011\)](#), who found that numerical inability has no significant impact on student intentions to not choose the accounting profession. However, in a previous study, [Germanou et al. \(2009\)](#) found that students consider the accounting profession stressful and tiring, which is not corroborated by this study.

## 5.2. Normative beliefs

The results concerning normative beliefs demonstrated that *peer influence* and *teacher influence* were the most significant variables in predicting students' adverse subjective norms related to not choose the accounting profession. These findings correspond with those of various extant studies which have demonstrated that instructors/teachers ([Auyeung & Sands, 1997](#); [Mauldin et al., 2000](#); [Tan & Laswad, 2006](#)) and peers ([Jackling & Keneley, 2009](#); [Mauldin et al., 2000](#); [Tan & Laswad, 2006](#)), as part of referent groups, impact career intentions.

Prior research has emphasized that teachers in introductory courses in accounting have an important role in determining students' accounting career choice ([Geiger & Ogilby, 2000](#); [Jackling & Calero, 2006](#); [Mauldin et al., 2000](#)). This can be explained by the fact that success in early courses is vital in determining students' intention to major in the field ([Cohen & Hanno, 1993](#)); that is, it is during the first few courses that students often formulate their career decisions ([Mauldin et al., 2000](#)). This study's findings suggest that traditional teaching-techniques be reconfigured to include techniques that allow students to establish a better relationship with accounting teachers. For instance, individual discussions or smaller focus groups with students are complementary techniques that establish a closer relationship between the teachers and students. This relationship will also enable teachers to be more engaged and student-oriented in their teaching, ensuring that they adopt a more positive accounting approach. The findings also suggest that teachers should include more practical elements during accounting lectures that are well anchored in an accountant's professional life, similar to the workshops' activities. Since lectures, in general, are theoretical in content, it implies that accounting education's theoretical aspect will be more consistent with the practical side of accounting. The practical aspect of accounting lectures will also co-exist with and serve as a great complement to the workshops. Thus, the subject matter may be considered more interesting, and the number of students choosing accounting as a major will most likely increase ([Adams et al., 1994](#); [Coetzee & Oberholzer, 2010](#); [Mauldin et al., 2000](#); [Tan & Laswad, 2006](#)).

To address *peer influence*, it is essential to expose the students' peers to positive outcomes of different events that the students have attended. This need for promotional and communication efforts that extend beyond the traditional classroom has been acknowledged in prior research to address different referent groups ([Cohen & Hanno, 1993](#); [Jackling & Keneley, 2009](#); [Law, 2010](#); [Tan & Laswad, 2006](#)). It is argued that promotion through social media will have a more significant impact in reaching out to peers than traditional media. The significant results obtained in this study show how the success of workshops, guest lectures, and mentoring programs have been for the students can be publicized through social media. Similarly, through social media, how internships, seminars, and the customized accounting lectures with a closer relationship with the teachers positively influence the students should be shown. Exposing information to peers in this manner may foster a more positive approach towards accounting, and their influence on the students' subjective norms is, therefore, most likely to change. Thus, the likelihood of students choosing a career in accounting increases, addressing the accountants' deficiency.

Like adverse attitudes, students with an adverse subjective norm toward accounting due to influence from peers and teachers may enter the profession, acting on their thoughts and opinions. As aforementioned, a good salary and a profession's association with status/power can be essential for individual decision-making. If the aspect of individualism is real, it may also explain why *parental influence* is less significant in influencing the students' adverse subjective norms. Thus, if one is less influenced by one's parents, in whom one often places the most trust, one would likely act more as an individual rather than in response to the opinions of others. This outcome is similar to that of [Paolillo and Estes \(1982\)](#), who demonstrated that parental influence was less critical than other influences on students' career choices. However, it still contradicts the majority of prior research where this was considered to be an important variable affecting students' accounting career choice

(Auyeung & Sands, 1997; Dandy & Nettelbeck, 2002; Jackling et al., 2012; Jackling & Keneley, 2009; Law, 2010; Pearson & Dellman-Jenkins, 1997; Tan & Laswad, 2006).

In the 1990s, research using the simplified TRA model in an accounting context focused more on the students' behavioral beliefs and attitudes regarding the profession (Felton et al., 1995). Similar subsequent research discovered that behavioral beliefs were more significant than normative beliefs in investigating the students' attitudes and intentions concerning this profession (Jackling et al., 2012; Jackling & Keneley, 2009; Law, 2010). This was confirmed by the present study's findings since the  $R^2$  values for normative beliefs (see Table C.1, Appendix C) were small compared to those of behavioral beliefs (see Table B.1, Appendix B).

Last, the COVID-19 pandemic implies challenges: nobody knows how long the pandemic will last and how it will affect the accounting education structure once it is over. Nonetheless, most of this study's implications can still be conducted online with slight modifications, excluding the real-life face-to-face interaction, to their content. It is possible to conduct workshops, guest lectures, and mentorship via different social platforms online. Similarly, teachers can still conduct lectures and individual talks and establish focus groups via online platforms.

## 6. Conclusions

### 6.1. Significant findings

Considering the insufficient accounting professionals in Sweden, this study used the simplified TRA model, elaborated upon by Felton et al. (1995), to examine students' beliefs that resulted in them not choosing the accounting profession. The model was preferred since there is relatively scarce literature that uses this theory in the Swedish context. Three primary variables were recognized for determining behavioral beliefs: *no personal interest in accounting*, *accounting is a boring profession*, and *higher salaries in other occupations*. The results show that most students in Sweden do not choose the accounting profession since they do not have a personal interest in accounting, they perceive an accounting career to be boring, or they believe that other occupations (e.g., management or marketing) yield higher salaries. In terms of normative beliefs, the primary factors recognized were *peer influence* and *teacher influence*. The findings reveal that students in Sweden would, in all likelihood, be affected by peers and teachers (adverse subjective norms), which may cause them to not choose the accounting profession.

### 6.2. Contributions and practical implications

This study adds to the literature by providing a more up-to-date TRA model of the accounting profession in the Swedish context and makes recommendations on how the deficiency of accounting professionals in Sweden can be addressed. It is necessary for accounting departments and business school faculties to recruit professional accountants and invite the Swedish professional accounting bodies, to give workshops using real scenarios and guest lectures about the profession, along with supportive mentoring. This will motivate students to major in accounting and subsequently enter the profession, helping to mitigate the country's professional deficiency. Moreover, compulsory internships and seminars should be part of the school curriculum to motivate students further. Additional methods such as individual talks or focus groups between students and accounting teachers should be implemented, and the teachers should be more practical when teaching. Further, accounting departments and business school faculties should positively expose these efforts through social media to address negative peer influence.

Concerning educational pathways in Sweden, the Bachelor's programs in Business and Economics (180 credits and 240 credits) are, in most cases, very general during the first years of education, since their focus is mainly on introductory courses. Therefore, these motivational efforts should be implemented at the beginning of academic programs for students to be more optimistic about the profession before choosing their primary specialization. Similarly, these changes should be implemented in Swedish universities with Bachelor's programs in Business Administration (180 credits), even though their curricula only contain mandatory Business Administration courses.

### 6.3. Study limitations

It should be noted that some sampled students responded that they were not in a semester where they could choose a major, and, therefore, they were not the target group (first-year or second-year students). These respondents had presumably selected accounting as a major and might have held different beliefs regarding the profession.

### 6.4. Scope for further research

Further longitudinal research is recommended, as beliefs and personal attitudes are not constant; they change over time. In addition, the  $R^2$  values for behavioral and normative beliefs obtained in this investigation were not particularly high from a statistical viewpoint. Therefore, qualitative research is recommended to explore other factors determining behavioral and

normative beliefs that the simplified TRA model does not explain. Additional studies should also be conducted to investigate the relations between beliefs, personal attitudes, and demographic variables (e.g., gender or age).

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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### **Appendix A. Questions**

#### **1. Gender**

- Female
- Male

#### **2. Age**

- 15–20
- 21–26
- 27–32
- 33–38
- Over 38

#### **3. At which university do you study?**

- Stockholm University
- Uppsala University
- Gothenburg University
- Umeå University
- Karlstad University

#### **4. Current semester at the university?**

- Semester 1
- Semester 2
- Semester 3
- Semester 4
- Other semester

#### **5. Which major field of study do you intend to choose?**

- Business Administration
- Economics
- Other field
- I don't know

**6. Please rate the following statement corresponding to your opinion. 1 = Totally disagree, 5 = Totally agree.**

I will not choose a career in accounting because I do not have a personal interest in it.

**7. Please rate the following statement corresponding to your opinion. 1 = Totally disagree, 5 = Totally agree.**

I will not choose a career in accounting because I believe other occupations offer more job opportunities than accounting.

**8. Please rate the following statement corresponding to your opinion. 1 = Totally disagree, 5 = Totally agree.**

I will not choose a career in accounting because I find it difficult to work with figures.

**9. Please rate the following statement corresponding to your opinion. 1 = Totally disagree, 5 = Totally agree.**

I will not choose a career in accounting because I believe that accounting is a boring occupation

**10. Please rate the following statement corresponding to your opinion. 1 = Totally disagree, 5 = Totally agree.**

I will not choose a career in accounting because I believe that accounting is a stressful and tiring occupation.

**11. Please rate the following statement corresponding to your opinion. 1 = Totally disagree, 5 = Totally agree.**

I will not choose a career in accounting because I believe that other occupations offer higher salaries.

**12. Please rate the following statement corresponding to your opinion. 1 = Totally disagree, 5 = Totally agree.**

I have an adverse attitude toward a career in accounting.

**13. Please rate the following statement corresponding to your opinion. 1 = Totally disagree, 5 = Totally agree.**

My parents influence me to not choose a career in accounting.

**14. Please rate the following statement corresponding to your opinion. 1 = Totally disagree, 5 = Totally agree.**

My friends influence me to not choose a career in accounting.

**15. Please rate the following statement corresponding to your opinion. 1 = Totally disagree, 5 = Totally agree.**

My teachers influence me to not choose a career in accounting.

**16. Please rate the following statement corresponding to your opinion. 1 = Totally disagree, 5 = Totally agree.**

I believe that I will be influenced by other people to not choose a career in accounting

**Appendix B. Behavioral beliefs**

See [Tables B1 and B2](#).

**Table B1**

Regression model summary for behavioral beliefs.

Model summary				
Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
1	0.775 <sup>a</sup>	0.601	0.590	0.857

<sup>a</sup>Predictors (Constant): Higher salaries in other occupations, Numerical inability, Accounting is a stressful and tiring profession, Accounting is a boring profession, More job opportunities in other occupations, No personal interest in accounting.

**Table B2**

Analysis of variance for behavioral beliefs.

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	244.189	6	40.698	55.459	<b>0.000<sup>b***</sup></b>
	Residual	162.180	221	0.734		
	Total	406.368	227			

Significance threshold of 0.05 ( $p = 0.05$ ).<sup>a</sup> Dependent Variable: Adverse attitude concerning the accounting profession.<sup>b</sup> Predictors (Constant): Higher salaries in other occupations, Numerical inability, Accounting is a stressful and tiring profession, Accounting is a boring profession, More job opportunities in other occupations, No personal interest in accounting.

## Appendix C. Normative beliefs

See [Tables C1 and C2](#).**Table C1**

Regression model summary for normative beliefs.

Model Summary				
Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
1	0.489 <sup>a</sup>	0.239	0.229	0.33930

<sup>a</sup> Predictors (Constant): Teacher influence, Peer influence, Parental influence.**Table C2**

Analysis of variance for normative beliefs.

ANOVA <sup>a,c</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.111	3	2.704	23.486	<b>0.000<sup>b***</sup></b>
	Residual	25.787	224	0.115		
	Total	33.898	227			

Significance threshold of 0.05 ( $p = 0.05$ ).<sup>a</sup> Dependent Variable: Adverse subjective norms concerning the accounting profession.<sup>b</sup> Predictors (Constant): Teacher influence, Peer influence, Parental influence.<sup>c</sup> The dependent variable is transformed  $y_2 = \sqrt{y_2}$ .

## Appendix D. Prediction model

See [Tables D1 and D2](#).**Table D1**

Regression model summary for predicting students' intentions to not choose the accounting profession.

Model Summary <sup>b</sup>				
Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
1	0.783 <sup>a</sup>	0.612	0.609	0.837

<sup>a</sup> Predictors (Constant): Adverse subjective norms (Standardized predicted value)<sup>c</sup>, Adverse attitudes (Standardized predicted value).<sup>b</sup> Dependent Variable: Intention to not choose the accounting profession.<sup>c</sup> The standardized predicted value for adverse subjective norms is based on the transformed  $y_2 = \sqrt{y_2}$ .**Table D2**

Analysis of variance for predicting students' intentions to not choose the accounting profession.

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	248.893	2	124.447	177.809	<b>0.000<sup>b***</sup></b>
	Residual	157.475	225	0.700		
	Total	406.368	227			

Significance threshold of 0.05 ( $p = 0.05$ ).<sup>a</sup> Dependent Variable: Intention to not choose the accounting profession.<sup>b</sup> Predictors (Constant): Adverse subjective norms (Standardized predicted value)<sup>c</sup>, Adverse attitudes (Standardized predicted value).<sup>c</sup> The standardized predicted value for adverse subjective norms is based on the transformed  $y_2 = \sqrt{y_2}$ .

## References

- Adams, S. J., Pryor, L. J., & Adams, S. L. (1994). Attraction and retention of high-aptitude students in accounting: An exploratory longitudinal study. *Issues in Accounting Education*, 9(1), 45–58.
- Ahmed, K., Alam, K. F., & Alam, M. (1997). An empirical study of factors affecting accounting students' career choice in New Zealand. *Accounting Education*, 6(4), 325–335.
- Albarracín, D., Johnson, B. T., Fishbein, M., & Muellerleile, P. A. (2001). Theories of reasoned action and planned behavior as models of condom use: A meta-analysis. *Psychological Bulletin*, 127(1), 142–161.
- Ali, A. M., Heang, L. T., Mohamad, R., & Ojo, M. (2008). Internship and audit expectation gap among undergraduate students in Universiti Utara Malaysia. *Journal of Financial Reporting and Accounting*, 6(1), 55–74.
- Allen, C. L. (2004). Business students' perception of the image of accounting. *Managerial Auditing Journal*, 19(2), 235–258.
- Arbetsförmedlingen (2018). *Prognos : Var finns jobben 2018 ?* <https://www.arbetsformedlingen.se/Om-oss/Statistik-ochpublikationer/Prognoser/Prognoser/Riket/2018-02-08-PrognosVar-finns-jobben2018.html>.
- Auyeung, P., & Sands, J. (1997). Factors influencing accounting students' career choice: A cross-cultural validation study. *Accounting Education*, 6(1), 13–23.
- Bogart, L. M., Cecil, H., & Pinkerton, S. D. (2000). Intentions to use the female condom Among African American Adults. *Journal of Applied Social Psychology*, 30(9), 1923–1953.
- Bosompra, K. (2001). Determinants of condom use intentions of university students in Ghana: An application of the theory of reasoned action. *Social Science & Medicine*, 52(7), 1057–1069.
- Bryman, A., & Bell, E. (2011). *Business research methods* (3rd ed). New York: Oxford University Press.
- Bryman, A., Bell, E., Mills, A. J., & Yue, A. R. (2011). *Business research methods* (Canadian Edition). Toronto: Oxford University Press.
- Byrne, M., & Flood, B. (2005). A study of accounting students' motives, expectations and preparedness for higher education. *Journal of Further and Higher Education*, 29(2), 111–124.
- Byrne, M., Flood, B., Hassall, T., Joyce, J., Arquero Montaña, J. L., González González, J. M., & Tourna-Germanou, E. (2012). Motivations, expectations and preparedness for higher education: A study of accounting students in Ireland, the UK, Spain and Greece. *Accounting Forum*, 36(2), 134–144.
- Byrne, M., & Willis, P. (2005). Irish secondary students' perceptions of the work of an accountant and the accounting profession. *Accounting Education*, 14(4), 367–381.
- Civilekonomerna (2016). *Arbetsmarknadsbarometer*. <https://civilekonomerna.se/system/files/documents/1730/barometern1.pdf>.
- Civilekonomerna (2019). *Här finns jobben för ekonomer 2024*. Available: <https://www.civilekonomen.se/aktuellt/har-finns-jobben-for-ekonomer-2024/>.
- Coetzee, S., & Oberholzer, R. (2010). South African career guidance counsellors' and mathematics teachers' perception of the accounting profession. *Accounting Education*, 19(5), 457–472.
- Cohen, J., & Hanno, D. M. (1993). An analysis of underlying constructs affecting the choice of accounting as a major. *Issues in Accounting Education*, 8(2), 219–238.
- Cory, S. N. (1992). Quality and quantity of accounting students and the stereotypical accountant: Is there a relationship? *Journal of Accounting Education*, 10(1), 1–24.
- Dalci, İlhan, & Özyapıcı, H. (2018). Cultural values and students' intentions of choosing accounting career. *Journal of Financial Reporting & Accounting*, 16(1), 179–196.
- Dandy, J., & Nettelbeck, T. (2002). A cross-cultural study of parents' academic standards and educational aspirations for their children. *Educational Psychology*, 22(5), 621–627.
- Deloitte (2017). *Transparency report 2016/2017: Aspire with assurance*. <https://www2.deloitte.com/content/dam/Deloitte/nl/Documents/aboutdeloitte/deloitte-nl-transparentieverlag-2016-2017.pdf>.
- Ekelund, J. (2016). *Stor personallöst inom finans och redovisning*. <http://www.realtid.se/karriar/stor-personallost-inom-finans-och-redovisning>.
- EY (2017). *Global review 2017: Our performance this year*. [https://betterworkingworld.ey.com/sites/default/files/2017-11/EY\\_Global\\_review\\_2017\\_2.pdf](https://betterworkingworld.ey.com/sites/default/files/2017-11/EY_Global_review_2017_2.pdf).
- FAR (2018). *Därför ska du anlita en auktoriserad redovisningskonsult*. <https://www.far.se/medlemskategorier/redovisningskonsult/anlita-enauktoriserad-redovisningskonsult/>.
- Felton, S., Buhr, N., & Northey, M. (1994). Factors influencing the business student's choice of a career in chartered accountancy. *Issues in Accounting Education*, 9(1), 131–141.
- Felton, S., Dimnik, T., & Northey, M. (1995). A Theory of Reasoned Action model of the Chartered Accountant career choice. *Journal of Accounting Education*, 13(1), 1–19.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, PA: Addison-Wesley.
- Geiger, M. A., & Ogilby, S. M. (2000). Main articles: The first course in accounting: Students' perceptions and their effect on the decision to major in accounting. *Journal of Accounting Education*, 18(2), 63–78.
- Germanou, E., Hassall, T., & Tournas, Y. (2009). Students' perceptions of accounting profession: Work value approach. *Asian Review of Accounting*, 17(2), 136–148.
- Granberg, D., & Holmberg, S. (1990). The intention-behavior relationship among U.S. and Swedish voters. *Social Psychology Quarterly*, 53(1), 44–54.
- Gray, D. E. (2017). *Doing research in the business world*. London: Sage Publications.
- Gärbling, T., Gillholm, R., & Gärbling, A. (1998). Reintroducing attitude theory in travel behavior research: The validity of an interactive interview procedure to predict car use. *Transportation*, 25(2), 129–146.
- Göteborgs Universitet. (2019). *Välkommen till Ekonomi kandidatprogrammet*. <https://handels.gu.se/utbildning/Programutbildningar/ekonomiprogrammet>.
- Hays (2017). *Kompetensbristen på Sveriges arbetsmarknad drar ifrån andra länder*. <https://news.cision.com/se/hays-sverige/rjny-rapport-kompetensbristen-pa-sveriges-arbetsmarknad-drar-ifran-andra-lander,c2399847>.
- Hutaibat, K. A. (2012). Interest in the management accounting profession: Accounting students' perceptions in Jordanian universities. *Asian Social Science*, 8(3), 303–316.
- Jackling, B., & Calero, C. (2006). Influences on undergraduate students' intentions to become qualified accountants: Evidence from Australia. *Accounting Education*, 15(4), 419–438.
- Jackling, B., & Keneley, M. (2009). Influences on the supply of accounting graduates in Australia: A focus on international students. *Accounting & Finance*, 49(1), 141–159.
- Jackling, B., de Lange, P., Phillips, J., & Sewell, J. (2012). Attitudes towards accounting: Differences between Australian and international students. *Accounting Research Journal*, 25(2), 113–130.
- Karlstads Universitet. (2019). *Civilekonomprogrammet, 240 HP credits*. <https://www.kau.se/utbildning/program-och-kurser/program/SACEK>.
- Konsulten. (2019). *Fortsatt efterfrågan på redovisnings- och lönekompetens*. <https://www.tidningenkonsulten.se/artiklar/fortsatt-efterfragan-par-redovisnings-och-lonekompetens/>.
- Kumar, A., & Kumar, P. (2013). An examination of factors influencing students selection of business majors using TRA framework. *Decision Sciences Journal of Innovative Education*, 11(1), 77–105.
- Law, P. K. (2010). A theory of reasoned action model of accounting students' career choice in public accounting practices in the post-Enron. *Journal of Applied Accounting Research*, 11(1), 58–73.
- Liou, S. R. (2009). Nurses' intention to leave: Critically analyse the theory of reasoned action and organizational commitment model. *Journal of Nursing Management*, 17(1), 92–99.
- Livingston, M. (2017). The most in-demand careers around the world. <https://www.westernunion.com/blog/jobs-in-demand/>.

- Lowe, D. R., & Simons, K. (1997). Factors influencing choice of business majors – some additional evidence: A research note. *Accounting Education*, 6(1), 39–45.
- Marriott, P., & Marriott, N. (2003). Are we turning them on? A longitudinal study of undergraduate accounting students' attitudes towards accounting as a profession. *Accounting Education*, 12(2), 113–133.
- Mauldin, S., Crain, J. L., & Mounce, P. H. (2000). The accounting principles instructor's influence on students' decision to major in accounting. *Journal of Education for Business*, 75(3), 142–148.
- McDowall, T., & Jackling, B. (2010). Attitudes towards the accounting profession: An Australian perspective. *Asian Review of Accounting*, 18(1), 30–49.
- Memarzadeh, F., Blum, S., & Adams, C. (2017). How do online reviews affect business travelers' accommodation choices? The application of Theory of Reasoned Action (TRA). *International Journal of Tourism and Hospitality Management in the Digital Age*, 1(1), 50–65.
- Mladenovic, R. (2000). An investigation into ways of challenging introductory accounting students' negative perceptions of accounting. *Accounting Education*, 9(2), 135–155.
- Montaño, D. E., & Kasprzyk, D. (2008). Theory of Reasoned Action, Theory of Planned Behavior, and the Integrated Behavioral Model. In K. Glanz, B. K. Rimer, K. Viswanath, & C. T. Orleans (Eds.), *Health behavior and health education: Theory, research, and practice*, San Francisco, pp. 67–96.
- Ng, Y.-H., Lai, S.-P., Su, Z.-P., Yap, J.-Y., Teoh, H.-Q., & Lee, H. (2017). Factors influencing accounting students' career paths. *Journal of Management Development*, 36(3), 319–329.
- Paimin, A. N., Hadgraft, R. G., Prpic, J. K., & Alias, M. (2016). An application of the theory of reasoned action: Assessing success factors of engineering students. *International Journal of Engineering Education*, 32(6), 2426–2433.
- Paolillo, J. G. P., & Estes, R. W. (1982). An empirical analysis of career choice factors among accountants, attorneys, engineers, and physicians. *The Accounting Review*, 57(4), 785–793.
- Pearson, C., & Dellman-Jenkins, M. (1997). Parental influence on a student's selection of a college major. *College Student Journal*, 31(3), 301–314.
- Pookulangara, S., Parr, J., Tanoff, L., & Nix, K. (2017). Insta-shopping : Examining use of Instagram for shopping online using Theory of Reasoned Action. In *International Textile and Apparel Association (ITAA) Annual Conference Proceedings* (pp. 77).
- Sable, M. R., Schwartz, L. R., Kelly, J., Lisbon, E., & Hall, M. A. (2006). Using the theory of reasoned action to explain physician intention to prescribe emergency contraception. *Perspectives on Sexual & Reproductive Health*, 38(1), 20–27.
- SACO. (2018). *Framtidsutsikter – Här finns jobben för akademiker år 2023*. <https://www.saco.se/opinion/rapporter/framtidsutsikter/>.
- Saemann, G. P., & Crooker, K. J. (1999). Main articles: Student perceptions of the profession and its effect on decisions to major in accounting. *Journal of Accounting Education*, 17(1), 1–22.
- Said, J., Ghani, E. K., Hashim, A., & Mohd Nasir, N. (2004). Perceptions towards accounting career among Malaysian undergraduates. *Journal of Financial Reporting and Accounting*, 2(1), 17–30.
- Samsuri, A. S. B., Arifin, T. R. B. T., & Hussin, S. B. (2016). Perception of undergraduate accounting students towards professional accounting career. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 6(3), 78–88.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th ed). Essex: Pearson Education Limited.
- SRF (2018). About Srf konsulterna. <https://www.srfkonsult.se/omsrf/about-srf/>.
- Stockholms Universitet. (2019). *Kandidatprogram i företagsekonomi, 180 hp*. [https://sisu.it.su.se/search/archive\\_info/SFEKK](https://sisu.it.su.se/search/archive_info/SFEKK).
- Sugahara, S., & Boland, G. (2006). Perceptions of the certified public accountants by accounting and non-accounting tertiary students in Japan. *Asian Review of Accounting*, 14(1/2), 149–167.
- Tan, L. M., & Laswad, F. (2006). Students' beliefs, attitudes and intentions to major in accounting. *Accounting Education*, 15(2), 167–187.
- Tan, L. M., & Laswad, F. (2009). Understanding students' choice of academic majors: A longitudinal analysis. *Accounting Education*, 18(3), 233–253.
- Umeå Universitet. (2019). *Civilekonomprogrammet*. <https://www.umu.se/utbildning/program/civilekonomprogrammet/>.
- Uppsala Universitet. (2019). *Utbildningsplan för Ekonomi kandidatprogram*. <https://www.uu.se/utbildning/utbildningar/selma/utbplan/?planId=468&pKod=SEK1K&lasar=19%2F20>.
- Uppsala Universitet. (2019). *Ekonomie kandidatprogram 2019/2020*. <https://www.uu.se/utbildning/utbildningar/selma/program/?pKod=SEK1K>.
- Usunier, J.-C. (1998). *International & cross-cultural management research*. London: Sage Publications.
- Uyar, A., Güngörmüş, A. H., & Kuzey, C. (2011). Factors affecting students' career choice in accounting: The case of a Turkish university. *American Journal of Business Education*, 4(10), 29–38.
- Vikström, L. (2017). Storbyråer växer så det knakar: Men tuft för mindre byråer att rekrytera. *Balans*, 8.
- Wells, P. K. (2015). New Zealand high school students' perception of accounting: How and why those perceptions were formed. *Accounting Education*, 24(6), 461–479.
- Wen, L., Yang, H., Bu, D., Diers, L., & Wang, H. (2018). Public accounting vs private accounting, career choice of accounting students in China. *Journal of Accounting in Emerging Economies*, 8(1), 124–140.