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PUBLISHED RESEARCH ARTICLES

"What Gave You THAT Idea?": Factors Impacting on Students' Perceptions of Accounting and Accountants

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It is widely acknowledged that stereotypical accountants are likely to be depicted in an unflattering manner. This is a matter of concern for professional accountancy bodies and educators alike given extant research posits that stereotypes play a role in the choice of career pursued. Using exploratory factor analysis (EFA), this paper contributes by providing empirical evidence on dual aspects of accounting stereotypes, namely those (1) relating to accounting work and (2) relating to accountants' personal characteristics. It provides additional evidence on the effect factors, such as ethical position, prior contact with accounting, and gender, have on the formation of these stereotypes.

1. Introduction

The popular children's writer David Walliams described one of the characters in *Grandpa's Great Escape* (2015) as follows: "Jack's father was an accountant. He spent all day doing long boring sums and didn't find it easy to express his feelings" (p. 58).

Walliams's fictional account neatly captures the faceted nature of accounting stereotypes – both the boring work done and the repressed personal characteristic contribute to the overall labelling of Jack's father as an accountant.

This research is important, as the identification of targeted actions, which are more likely to be successful in changing accounting stereotypes, will be informed by an understanding of how such accounting stereotypes arise in the first place. It is only by identifying the stereotypes of accountants and accounting work and understanding the factors that contribute to different types of stereotypes that efforts can be directed to changing perceptions of roles and tasks separately to efforts to change perceptions of personal characteristics. Concerted efforts have been made by the professional accountancy bodies and accounting firms to promote a different image of the accountant, through the use of more informal images of accountants, highlighting their adventurous and humorous side, and recruitment campaigns emphasising a good social life with opportunities for travel (Baldvinsdottir et al., 2009; Ewing et al., 2001; Jeacle, 2008) yet these efforts seem to have had little noticeable impact (D. Smith & Jacobs, 2011). More recently, advances in technology have been widely promoted as having the potential to remove tedious accounting work (ACCA, 2019; Appelbaum et al., 2017; Frey & Osborne, 2013; International Federation of Accountants, 2017; Richins et al., 2017), while the academic literature on the business partnering role of management accountants indicates the roles and identities of management accountants are changing (Baldvinsdottir et al., 2009; Goretzki & Messner, 2019). Relatively recently, the U.S. Center for Audit Quality (2021) posted a video to target potential accountants and auditors that aims to "dispel some of the common stereotypes tied to those careers". In this context, understanding the stereotypes, and to what extent these stereotypes remain unmodified for the current generations, is very relevant for the accountancy profession and its future.

It is particularly interesting to understand the role ethical position plays in the creation of accounting stereotypes as academic literature has found empirical evidence on the relationship between individuals' moral positions and their ethical judgements (Barnett et al., 1994; Bass et al., 1999). However, ethical issues have received only minimal attention in the extant literature on the public perception of accountants (Caglio & Cameran, 2017).

A stereotype occurs when the social perception of a particular group leads to a simplification and generalization of that group (Albu et al., 2011), based on the probability that members of the group have a given attribute (Allport, 1954/1979), thus creating beliefs about the characteristics of individuals who belong to a group (Stangor, 2000). There are undoubtedly many stereotypes, or generalized images of accountants in the popular media, and the depiction in *Grandpa's Great Escape* is but one. While accountants have frequently been the subject of ridicule in these depictions, a more serious consideration is that financial scandals have brought much negative publicity to the accountancy profession (McCann et al., 2015; D. Smith & Jacobs, 2011).

Accounting serves the public interest, generally defined as the collective well-being of people and institutions (Dellaportas & Davenport, 2008). According to Legitimacy Theory (Deegan, 2002), accounting may confer legitimacy to other organizations but only after guaranteeing its own legitimacy (Maroun & Solomon, 2014), and therefore a negative stereotype may be of particular concern to a profession that relies on reputation and social acceptance by the community (Deegan, 2014). Legitimacy Theory is often linked to the idea of "social contract", representing the multitude of implicit and explicit expectations that society has about how an organization should conduct itself (Deegan, 2002). Establishing legitimacy leads to the perception of being responsible, dependable, and trustworthy (Suchman, 1995).

It is worrying for the profession that society generally expects individual members of a defined group to act in line with their stereotype (Miley & Read, 2012).

The point is well made by Byrne and Willis (2005) that to attract the right candidates into the profession, a generally accepted depiction that more accurately reflects the accountant's actual work and required skill sets is necessary. The Consultative Committee of Accountancy Bodies – Ireland

(CCAB – Ireland) echoes that sentiment. It expressed concern in its 2021 submission to the Irish National Council for Curriculum and Assessment that misconceptions about the nature and scope of work undertaken by accountants, as well as a lack of understanding of the role accountants play within organizations, will adversely impact the ability to attract new talent into the profession (CCAB – Ireland, 2021, p. 9).

Stereotypes of accountants have both positive and negative traits: accountants are expected to be boring and dull (Dimnik & Felton, 2006; D. Smith & Jacobs, 2011) but trustworthy and reliable (Carnegie & Napier, 2010), or occasionally with mixed perceptions such as "boring but honest" as suggested by Friedman and Lyne (2001). The accounting work stereotypes and images vary from the traditional bookkeeping activity to the contemporary role of modern accounting (Carnegie & Napier, 2010).

Therefore, our first research objective is to advance our understanding of the general perception of accounting, by identifying the stereotypes (associated with accounting work and accountants' personal characteristics) that currently exist among university accounting and business students. This study uses exploratory factor analysis (EFA) to explore the two aspects of accounting stereotypes related to (1) the tasks and duties carried out by accountants and (2) the personal characteristics of accountants.

The second objective of this paper is to examine to what extent specific factors affect the formation of these stereotypes. In particular, ethical position, gender, and previous contact with the profession have the potential to affect the perception of accountants and accounting work. Women are traditionally stricter than men in labelling business practices as unethical (Caglio & Cameran, 2017) and are often disincentivized to develop their professional career in an accounting firm (Dambrin & Lambert, 2008). To achieve our second objective, we generated regression analysis to study the effects of ethical position, gender, previous knowledge and contact with the profession on the stereotypes.

Finally, to focus specifically on the effects of the ethical personality, we carried out an ANOVA analysis, and a post-hoc test between groups to show their different perception.

This study contributes to the literature by building on prior studies of stereotypes associated with the accountancy profession. It provides empirical evidence of both negative and positive elements linked (1) to the work done by accountants and (2) to the personal characteristics of accountants. The study also contributes by providing empirical evidence on the factors that play a role in the formation of these perceptions.

Our study is particularly relevant to the accountancy profession because inaccurate perceptions could (1) deter potential students who have the necessary aptitudes and skills from pursuing a career in accounting, and also (2) perpetuate the existing stereotypes that imply a self-fulfilling prophecy (Friedman & Lyne, 2001).

We found that accounting work is regarded as useful and knowledge based, and consequently was perceived as an attractive career option for those who are interested in the “language of business” (Jeacle, 2008). However, accounting work was still perceived as mechanical and dry, seen as number-crunching (Hunt et al., 2004) and therefore less challenging (Wells & Fieger, 2006).

We also gathered empirical evidence on the stereotypes relating to accountants’ personal characteristics; accountants are perceived as professional but also dreary, tragic and lacking morals. These mixed perceptions again are aligned with previous literature presenting the accountant as a professional (Hunt et al., 2004) but also perceived as a boring and grey character (Miley & Read, 2012; Picard et al., 2014) associated with corruption and earnings manipulation (Bougen, 1994; M. Smith & Briggs, 1999).

More interestingly, the regression results provide additional evidence on factors affecting the stereotypes. Gender, previous contact with the profession and students’ personality are drivers that determine the perception of accounting and accountants.

Stereotypes studies are relevant for the accountancy profession as accounting firms do not want to recruit “beancounters” (Jeacle, 2008; Samanthi & Gooneratne, 2023) and students may perceive being accountants themselves would affect their self-image (Hunt et al., 2004). The professional bodies in Ireland are concerned that prospective accounting students may be unaware that higher-order skills such as critical thinking and problem-solving are now, more than ever, central to the work undertaken by accountants and consequently prospective accounting students may avoid exploring accounting as a career option (CCAB – Ireland, 2021).

There are some limitations on this research study. Students were bounded by the choices in the questionnaire used and did not have the opportunity to articulate, in other terms, their individual perceptions of accounting work and accountants’ personal characteristics. Additionally, the data in this study was collected from students in just one university business school. This second limitation means that the ability to draw conclusions from this research study that apply in general will be constrained. We recognise that these limitations may help identify avenues for future research. The remainder of this paper is structured as follows. Section 2 presents a review of the existing literature that informed our hypotheses and research questions. Section 3 describes the sample and research method employed in testing the hypotheses. The results are then presented in Section 4 and discussed in Section 5. The final section also includes our conclusions and caveats.

2. Literature Review and Hypotheses Development

Our aim is to contribute to the theory of stereotyping by identifying the existing stereotypes of accounting work and accountants' personal characteristics and by analysing the factors that affect them, particularly the effect of the ethical position, as well as gender or previous contact with the accountancy profession.

2.1 Existing Stereotypes

The term 'stereotype' was first introduced by Lippmann (1922) at the beginning of the 20th century, as a concept he referred to as "the pictures in our heads", meaning concepts such as image or perception representing an "oversimplified picture of the world". Social psychology theory maintains that a stereotype is a fixed, generalized belief about a particular group that transcends the individual level and is therefore an excellent illustration of "collective constructs" as discussed by Hofmann (2004).

Studies in psychology and sociology have developed an extensive body of literature regarding race, social or gender stereotypes studies, which have become very popular subjects of scientific debate in recent years. According to McCauley et al. (1980) the study of stereotypes in psychology is linked to the understanding of human predictions about categories or individuals.

The theory of stereotyping is associated with the social identity theory (Richardson et al., 2015) as stereotypes present how people perceive members of a group, that is, the social or role identity. As set out by Hinton (2000), there are three conditions that help to define a stereotype: (1) a group of people are identified by specific characteristics; (2) a set of additional characteristics are attributed to the group; and (3) when identifying a person as a member of the group the stereotypical characteristics are fully applied to them. Wells (2015b) explained that the cognitive process of forming perceptions about certain groups usually involves the assignment of labels and these labels are more precisely called stereotypes. Therefore, stereotyping in this context has a similar meaning to general perception or public image, since stereotypes are the label given to a particular group.

Previous evidence can be found on the existence of stereotypes regarding the accountancy profession. From literature (Carnegie & Napier, 2010) to movies (Dimnik & Felton, 2006) and popular culture (Jones & Stanton, 2021; Miley & Read, 2012), the accountancy profession has been widely represented by stereotypes that are often said to be inaccurate and harmful (Wells, 2015a, 2017).

Stereotypes can have positive and negative traits, and the accountant has traditionally been shown as a dull, boring and timid character (D. Smith & Jacobs, 2011), weak and unimaginative (M. Smith & Briggs, 1999), but sometimes reliable and honest (Fisher & Murphy, 1995). A negative perception related to the corruption and fraud role of accountants (Friedman & Lyne, 2001; D. Smith & Jacobs, 2011) is likely to emerge more strongly after an economic or financial scandal (McCann et al., 2015). While acknowledging positive traits, Richardson et al. (2015) conclude that the stereotypical accountant generally appears in a negative way.

Previous literature pointed out the mismatch between (on the one hand) stereotypical perceptions of the skills and competences required for the accountancy profession and (on the other hand) the actual duties performed by accountants in the 21st century (Albrecht & Sack, 2000). In line with the contact hypothesis (Wells, 2017), a better understanding and deeper contact with accounting and accountants might be expected to bring a more positive perception of accounting work and accountants (Cory, 1992; Friedman & Lyne, 1997; Navallas et al., 2017).

Albrecht and Sack (2000) identify four factors that contribute to the persistence of the existing stereotype: (1) failure of teachers and career guidance advisors in second-level schools to properly understand what a career in accounting entails; (2) a mismatch between the perceived skill set and actual skill set needed for a successful career in accounting; (3) an emphasis on the narrow role of bookkeeping in second-level school accounting curricula; and (4) the narrow focus on the scorekeeping element of financial reporting in third-level institutions' introductory accounting courses. The American Accounting Association's Pathways Commission (2012) cautioned that the lack of information about the real nature of the work of accountants and "misperceptions" that careers in accounting are confined to bookkeeping and auditing were contributing to the problem the profession was facing in attracting talented school leavers and university students who had the requisite skill sets to succeed in this career.

A consequence of negative stereotypes may be that students with the appropriate skills and capabilities may be discouraged from entering the profession (Albrecht & Sack, 2000). To reverse the effects of negative stereotypes, accounting firms have enhanced the positive message sent from their corporate webpages, because they do not want their recruitment efforts to primarily attract 'beancounters' (Jeacle, 2008). They have moved to creating an image of a value-adding expert (Ewing et al., 2001) in an effort to avoid a self-fulfilling prophecy where the "wrong" kind of person is attracted by the "wrong" kind of recruitment effort (Friedman & Lyne, 2001).

Richardson et al. (2015) point out that stereotypes of the accountancy profession are sometimes intertwined with stereotypes of accountants characterized by perceived personality traits, with physical and personality traits dominating the perception of the professional tasks. As explained by Fiske et al. (2002), group stereotypes have two dimensions: one for personal characteristics and one for task performance.

While the accountancy profession has evolved along with financial markets (Albrecht & Sack, 2000; Hopwood, 1994), extant literature shows the social perception of accounting as a bookkeeping activity is almost the same one it was over 50 years ago (Coate et al., 2003; Parker, 2000). Previous studies show that the accountancy profession is viewed as less challenging, less conducive to interaction with others, less glamorous, and of lower social status compared with other careers such as law, engineering, or medicine (Hardin et al., 2000; Wells & Fieger, 2006). Accounting work is still portrayed as not compatible with creativity (Albrecht & Sack, 2000) and accounting is expected to have a predictable curriculum and to be routine and boring (Mathews et al., 1990). Consequently, students who possess the skills and abilities required by the profession may instead be directed to alternative career opportunities (Hardin et al., 2000). Accountants now operate in more complex and technological environments (Bhimani & Willcocks, 2014; Guthrie & Parker, 2016; D. Warren et al., 2015) but the general perception has not changed.

Given that existing accounting literature rarely separates accounting work stereotypes from those that relate to the personal characteristics of accountants, this study examines the existence of separate stereotypes of accountants' personal characteristics and of accounting work. Therefore, we posit the following hypotheses:

> *H1a: There are separately identifiable stereotypes of accounting work, with positive and negative traits.*
>
> *H1b: There are separately identifiable stereotypes of accountants' personal characteristics, with positive and negative traits.*

2.2 Factors Affecting the Formation of Stereotypes

Despite the extended literature about accounting stereotypes, most of the studies describe the stereotype and its public perception: accountants portrayed in films (Dimnik & Felton, 2006; Felton et al., 2008), music (D. Smith & Jacobs, 2011), cartoons (Blaber et al., 2020), or literature (Carnegie & Napier, 2010), and little research examines how these stereotypes are formed (Brouard et al., 2017; S. Warren & Parker, 2009). The consequence of the public perception is that it may become a self-fulfilling prophecy (Friedman & Lyne, 2001) and students with appropriate skills are discouraged from entering the profession (Albrecht & Sack, 2000), particularly the "best and brightest" (Chen et al., 2021; Cory, 1992; M. Smith & Briggs, 1999).

2.2.1 Previous Contacts

According to Holland (1973), behavioural studies suggest that individuals decide their career based on vocational stereotypes, and stereotyping or the prototypical perception of a group is generally formed in the early years of a person's life through socialisation processes. These processes include not only exposure to popular media such as television or cinema, but also the opinions and perceptions of family and professional contacts, such as parents and teachers, and institutions such as schools or universities. Family and friends can be considered as the strongest transmitters of cultural stereotypes (Mackie et al., 1996).

Previous studies found evidence that a significant number of students decide their professional career while still at high school and that their teachers are key in this decision-making process (Hardin et al., 2000). Wells and Fieger (2006) found that high school teachers do not have a very positive opinion of accountancy as an interesting career opportunity relative to other careers, which discourages students (Byrne & Willis, 2005; Fisher & Murphy, 1995). A lack of understanding about the profession among high school teachers and counsellors has been highlighted in previous research (Hardin et al., 2000; Wells & Fieger, 2006).

Some studies point to the benefits of increasing contact with the accountancy profession, showing a better perception of accountants with increased knowledge and exposure (Fedoryshyn & Tyson, 2003; Friedman & Lyne, 1997; McGrath & Murphy, 2016). Saemann and Crooker (1999) found that the initial negative perception improves following deeper contact with the profession and Jackling and Calero (2006) found evidence that many students formed their judgements about the work of accountants from their accounting studies, influencing their decision to become an accountant.

Smith and Zarate (1990) conclude that individuals who are exposed to the prevailing stereotype relating to a particular group before having any contact with individual members of this profession are more likely to incorporate the use of these stereotypes when making judgements about the group. Byrne and Willis (2005) found that students studying accounting do have a less negative view of the subject than students who are not studying it. However, Byrne and Willis (2005) added the caveat that students who had studied accounting still tended to hold a more traditional view of the profession and the role of the accountant. Wells (2017) argues that students' experience of the subject within the classroom is a key determinant of their perception of accounting.

While results are mixed, extant research findings suggest that contact with accountants is one of the most effective ways to change perceptions of the profession (Cory, 1992; Del Campo et al., 2016), mainly related to the duties performed (Wells, 2017).

2.2.2 Creativity

Some authors have studied the personal characteristics that may affect the perception of accounting and of accountants' personal characteristics. Saemann and Crooker (1999) found that students with a "high creativity" self-perception are discouraged by the "beancounter" image of the profession and creative people are therefore encouraged to focus on careers other than accountancy (Chen et al., 2021; Hermanson et al., 1995; Saemann & Crooker, 1999).

We expect students with a higher self-perception of their creativity to have a poorer perception of accountancy and of accountants' personal characteristics, as there is a general perception of accountancy as a highly rules-based profession and of accountants as obsessed with details and lacking in creativity (Albrecht & Sack, 2000; Carnegie & Napier, 2010). It follows that more creative students are discouraged by the image of "order and precision" (Baxter & Kavanagh, 2012; Saemann & Crooker, 1999).

2.2.3 Gender

Gender is also identified as a factor affecting perceptions of the accountancy profession, not only because historically women joined the labour market later, but also because men and women have different perceptions of the world and engage with it in different ways (Hames, 1994) and may present different ethical positions (Sharp et al., 1998). Caglio and Cameran (2017) found that gender is one of the most relevant factors that affects accountants' ethical perception, as women are stricter than men in labelling business practices as unethical. As explained by Hines (1988), the accountancy profession both reflects and shapes reality, as in the accountancy profession women have traditionally achieved lower performance evaluations (Jonnergård et al., 2010) and are generally perceived as less likely to succeed (Anderson et al., 1994). Conflicting demands of work and parenting (Dambrin & Lambert, 2008; Kokot-Blamey, 2021) and the glass ceiling (Broadbent & Kirkham, 2008) have proved challenging for women.

Given the previous findings, previous knowledge of the accountancy profession, gender, and creativity are expected to affect the perception of accounting and of accountants' personal characteristics:

> *H2: There are significant differences in the perceptions of accounting work and of accountants' personal characteristics related to (a) previous accounting studies, (b) contact with the profession, (c) first-year students, (d) gender, and (e) personality.*

2.2.4 Ethical Position and Stereotypes

Accounting scandals have had a negative effect on the credibility of the profession (McCann et al., 2015), as accountants were perceived to have had a role in the frauds committed (Carnegie & Napier, 2010; Courtois & Gendron, 2017; D. Smith & Jacobs, 2011). These accounting scandals are likely to have impacted the stereotypes of accountants and accounting work while factors such as the level of education, having attended an accounting course at high school level, or gender have a significant impact on the ethical perception of the accountancy profession (Caglio & Cameran, 2017). Moral philosophy refers to the relativist and/or idealist position, where relativism describes the rejection of universal moral principles and rules, and idealism refers to the perception of the consequences of an action and how they affect the welfare of others (Forsyth, 1980) and therefore it is expected that the stereotypes would differ between individuals with different relativist/idealist positions.

Barnett et al. (1994) and Forsyth (1980) identify and define four distinct ethical ideologies that reflect where individuals sit on the spectrums of both idealism and relativism. These four ethical ideologies are absolutist, subjectivist, situationist, and exceptionist. Based on the definitions provided by Forsyth (1980) and Barnett et al. (1994):

1. An absolutist believes the best possible outcome is always achievable when universal moral rules are followed.

2. A subjectivist rejects the applicability of universal moral rules and believes that negative consequences are not necessarily an indicator of an immoral action.

3. A situationist rejects the idea of a universal moral code and believes moral decisions should have positive consequences.

4. An exceptionist accepts moral rules in general but is willing to discard them to avoid negative consequences.

Previous research indicates that females hold a more favourable view of the ethical behaviour of accountants (Caglio & Cameran, 2017) and are less influenced by negative stereotypes associated with the accountancy profession (Hunt et al., 2004). Lips (1992) finds that women put less faith in the existence of stereotypes for a given job.

The literature has found empirical evidence on the relationship between individuals’ moral positions and their ethical judgements (Barnett et al., 1994; Bass et al., 1999). According to Forsyth (1992), idealism measures how the welfare of others affects individual decisions and those with higher idealistic personalities will be concerned about public interests in their decisions. Relativism measures the extent to which individuals apply a common moral code depending on their idiosyncratic circumstances. Elias (2002) found that individuals who are higher in idealism or lower in relativism judge earnings management “more harshly”, viewing it as less ethical, while Ballantine et al. (2014) found that idealism has a significant positive association with intolerance of unethical behaviour in students while relativism reported no association.

It is likely that the degree of blame attributed to accountants resulting from financial scandals, and consequently their perception of accountants and accounting, will differ between individuals depending on their ethical positions. Therefore, we posit the following hypothesis:

> *H3: There are significant differences in perceptions of accounting work and accountants’ personal characteristics based on an individual’s ethical position.*

3. Research Method

With the aim of identifying the existing stereotypes, we used EFA to determine the existence of (1) stereotypes relating to accounting work; (2) stereotypes relating to accountants' personal characteristics; and (3) how positive and negative traits regarding accountants' personal characteristics and accounting work can be found in students' perceptions.

Secondly, we ran a regression model to understand the effects of the independent variables on the stereotypes.

Finally, to explore the impact of the different personalities according to their idealism and relativism and therefore their ethical position on the perception of accounting work and accountants, a one-way between-groups analysis of variance was conducted.

3.1 Data and Sample

A cross-sectional survey questionnaire was used to gather the data employed in testing the hypotheses of this study. The sample consisted of students enrolled in an Irish university. Data was collected towards the end of the first semester and anonymity was assured. Students were given a pen and paper survey with four sections. The first section captured demographic data, shown here in **Table 1**. The second section asked the students about their perceptions of accounting work and accountants' personal characteristics, and the third section measured students' creativity self-perception personality. Finally, the fourth section gathered information about the students' ethical positions.

After excluding those surveys that were not properly answered, our final sample consisted of 515 usable sets of responses whose descriptive statistics can be found in **Table 1** and **Table 2**.

3.2 Variable Measurement – Instrument

The questionnaire used was adapted from Richardson's (2015) survey, based on 48 statements using a 1–7 Likert scale, reflecting the portrayal of accounting work and of accountants' personal characteristics. Richardson et al. (2015) carried out a comprehensive literature review on perceptions of accounting work and accountants' personal characteristics and identified the most common perceptions evidenced in the literature. Therefore, the 48-item questionnaire used in this paper represents the general perception of accounting work and accountants' personal characteristics according to extant literature reviewed by the authors. The extant literature called for empirical studies to examine the validity of these measures. Richardson (2015) classified these statements in two dimensions: Bookkeeping activity and Contemporary role, with positive and negative traits for both accounting work and accountants' personal characteristics.

Table 1. Independent Variables: Gender and Previous Contact with Accounting

Gender	Frequency	%
Male	242	47
Female	265	51
n/a	8	2
Total	515	100

First-year students	Frequency	%
First year	340	66
Non first year	171	33
n/a	4	1
Total	515	100

Accounting studies	Frequency	%
No previous studies	70	14
Junior Certificate	258	50
Leaving Certificate	42	8
Junior + Leaving Cert	134	26
n/a	11	2
Total	515	100

Working experience	Frequency	%
No	206	40
Yes	309	60
Total	515	100

Table 2. Independent Variables: Personality Variables

	Min	Max	Mean	Std dev
Idealistic personality	0	70	50.06	14.67
Relativistic personality	0	70	40.11	14.93
Creativity self-perception	−5	13	2.79	3.20

3.3 Methodology

3.3.1 Identifying Stereotypes: Exploratory Factor Analysis

The first objective of this analysis was to determine and to understand the existence of stereotypes relating to accounting work and accountants' personal characteristics, and how positive and negative traits can be found in students' perceptions. EFA is founded on philosophical and statistical principles (Mulaik, 1987) and is widely used and applied in information systems, social science, education, and psychology research. It allows the investigator to explore the main variables within a theory or model and does not have an a priori fixed number of factors (Taherdoost et al., 2014). Therefore, to test the H1 hypothesis, and to identify the existing stereotypes,

Table 3. Accounting: Exploratory Factor Analysis

	1	2	3	4
Accounting is about the application of rules	0.123	0.290	**0.567**	0.097
Accounting requires expertise in accounting, tax and other regulation	0.122	0.383	**0.637**	0.015
Accounting is complex and diverse	0.165	−0.127	**0.758**	0.051
Accounting is routine	0.055	**0.684**	0.313	0.118
Accounting is intellectually challenging	0.094	0.059	**0.712**	−0.191
Accounting is repetitive	0.062	**0.755**	0.012	0.232
Accounting is bookkeeping	0.068	**0.784**	0.062	0.012
Accounting is boring	−0.060	0.149	0.036	**0.889**
Accounting is used in making major decisions	**0.642**	0.222	0.316	−0.050
Accounting provides decision support for managers	**0.838**	0.006	0.141	0.059
Accounting practice requires technical and ethical competence	**0.818**	−0.105	0.096	−0.072
Accounting is number crunching	**0.621**	0.289	0.032	0.261
Accounting is uninteresting	0.148	0.132	−0.077	**0.876**

We use principal components with Varimax rotation to extract all factors with eigenvalue > 1.

we ran an EFA. Following the approach used by Richardson (2015), we considered EFA to be an appropriate methodology in understanding the factors influencing the construction of stereotypes.

EFA was carried out on the 24 statements of perceptions of accounting work and 24 statements of perceptions of accountants' personal characteristics. Sample size is above the minimum recommended level (Young & Pearce, 2013).

EFA on Accounting Work Stereotypes. Before the exploratory analysis, we first checked the correlation between our variables as very low correlations would be excluded and very high correlations could indicate multicollinearity problems.

Statements with correlations of less than 0.3 were excluded. No correlations of greater than 0.9 existed, indicating that multicollinearity was not a problem. EFA results revealed four factors with eigenvalues > 1.0, which explain 62.78% of the total variance. The KMO value was 0.774, above the recommended value of 0.6, and Bartlett's Test of Sphericity shows statistical significance, thus supporting the factorability. The first factor accounts for 27.15% of the variance. Table 3 shows factor loadings for accounting perceptions, revealing strong loadings when using Varimax rotation. Factor loadings are above 0.5 and a high number of them above 0.7, indicating how these variables contribute to the factor.

When analysing the reliability of the factor solution (Table 4), we got positive results for the four groups, with Cronbach Alpha slightly low for two of the constructs (*mechanical* and *knowledge based*), but acceptable and in line with prior research (Garcia Osma et al., 2018), supporting its reliability.

EFA on Accountant Personal Characteristic Stereotypes. Before we ran an EFA, we excluded those variables with lower correlation coefficients and those loading on more than one factor. Analysis resulted in four factors with eigenvalues > 1.0, which explains 60.03% of the variance. KMO test

Table 4. Accounting: Reliability Analysis

Constructs	Items	Loading	% Variance explained	Bartlett’s (< 0.5)	KMO index (recommended > 0.6)	Alpha (> 0.7)
Useful	Accounting is used in making major decisions	0.737	57.44%	0.00	0.74	0.75
	Accounting provides decision support for managers	0.839				
	Accounting is number crunching	0.780				
	Accounting practice requires technical and ethical competence	0.665				
Mechanical	Accounting is routine	0.780	61.80%	0.00	0.67	0.69
	Accounting is repetitive	0.809				
	Accounting is bookkeeping	0.769				
Knowledge based	Accounting is about the application of rules	0.662	49.84%	0.00	0.69	0.66
	Accounting requires expertise in accounting, tax and other regulation	0.756				
	Accounting is complex and diverse	0.699				
	Accounting is intellectually challenging	0.704				
Dry	Accounting is uninteresting	0.907	82.23%	0.00	0.5	0.78
	Accounting is boring	0.907				

(0.879) and Bartlett test (0.00) are acceptable, supporting the factorability of the matrix. The Cronbach Alpha for the EFA is 0.814, above the minimum recommended level. Table 5 shows factor loadings for respondents’ perceptions of accountants, revealing strong loadings also when using Varimax rotation.

When analysing the reliability of the factor construction (Table 6), Cronbach Alphas are above 0.7 for each factor, indicating acceptable reliability again in line with existing literature.

The results of this analysis support the presence of different dimensions of stereotypical perceptions of accountants (*dreary, tragic, professional, lacking morals*) and accounting work (*useful, mechanical, knowledge based, dry*), as suggested by Richardson et al. (2015). Table 7 shows the values for the factors created.

As shown in the correlation matrix in Table 8, there are statistically significant correlations between these perceptions, suggesting a relationship between the perception of accounting work and accountants.

3.3.2 Measuring Factors’ Effects: Regression Model

To understand the effects of the independent variables on the stereotypes and to test our second hypothesis H2, we ran a multiple regression model and results are shown in Table 8. Tests were conducted to ensure the assumptions of normality, linearity, and multicollinearity.

Table 5. Accountants: Exploratory Factor Analysis

	1	2	3	4
Accountants are dull	**0.697**	0.235	0.081	−0.167
Accountants are a joke	0.325	**0.784**	0.126	0.023
Accountants cannot be trusted	0.169	**0.668**	0.316	−0.096
Accountants are pathetic	0.232	**0.811**	0.158	−0.041
Accountants create and operate behind a false image of honesty	0.184	0.460	**0.600**	−0.056
Accountants lack spontaneity	**0.660**	0.116	0.315	0.019
Accountants are willing participants in corporate fraud	0.376	0.249	**0.566**	−0.158
Accountants are timid	**0.725**	0.158	0.194	0.075
Accountants are nerds	**0.649**	0.282	0.136	−0.024
Accountants would sacrifice a client or job to uphold ethical and professional principles	−0.010	0.114	−0.104	**0.788**
Accountants can be trusted to protect the interests of others before themselves	0.081	−0.126	−0.100	**0.713**
Accountants have a poor fashion sense	**0.645**	0.107	0.310	0.046
Accountants are unethical	0.297	0.189	**0.730**	0.016
Accountants manipulate the uncertainties in accounting for self-interest	0.265	0.108	**0.751**	0.071
Accountants pay attention to details	−0.155	−0.251	0.308	**0.635**
Accountants can be relied upon to blow the whistle when wrongdoings are discovered	−0.014	0.035	0.023	**0.739**

We use principal components with Varimax rotation to extract all factors with eigenvalue > 1.

Table 1 and Table 2 show independent variables description and the expected sign (see below):

Gender. Students were classified in two groups, male students and female students.

First-Year Students. Participants are classified as first-year students or non-first-year students.

Previous Accounting Studies. Students were asked about their previous knowledge of accounting. To measure this previous knowledge, four possible answers were available, as shown in Table 1.

Working Experience. Participants were asked about their previous working experience and previous contact with the job market. Available answers were “yes” for previous experience or “no” otherwise.

Ethical Position. An ethics position questionnaire (EPQ) was also included with 10 individualistic and 10 relativistic statements as used by Bryant et al. (2011) and based on Forsyth’s (1980) measurement found to be a two-factor structure and with adequate reliability and validity (Bryant et al., 2011; Elias, 2002). Students were asked to indicate the extent of their agreement on a 1–7 Likert scale.

Creativity Self-perception. A creativity self-perception variable was included in the survey taken from Saemann and Crooker (1999) and based on Gough’s 30-item Creative Personality Scale (CPS) (Gough, 1979). Students were asked to indicate which of the 30 personality characteristics regarding

Table 6. Accountants: Reliability Analysis

Constructs	Items	Loading	% Var	Bartlett’s (< 0.5)	KMO index (recommended > 0.6)	Alpha (> 0.7)
Dreary	Accountants are dull	0.717	53.830%	0.000	0.82	0.78
	Accountants lack spontaneity	0.750				
	Accountants are timid	0.760				
	Accountants are nerds	0.717				
	Accountants have a poor fashion sense	0.723				
Tragic	Accountants are a joke	0.874	69.996%	0.000	0.68	0.78
	Accountants cannot be trusted	0.772				
	Accountants are pathetic	0.861				
Professional	Accountants would sacrifice a client or job to uphold ethical and professional principles	0.770	52.798%	0.000	0.75	0.70
	Accountants can be trusted to protect the interests of others before themselves	0.723				
	Accountants pay attention to details	0.678				
	Accountants can be relied upon to blow the whistle when wrongdoings are discovered	0.732				
Lacking morals	Accountants create and operate behind a false image of honesty	0.779	60.878%	0.000	0.75	0.784
	Accountants are willing participants in corporate fraud	0.772				
	Accountants are unethical	0.803				
	Accountants manipulate the uncertainties in accounting for self-interest	0.767				

Table 7. Accounting and Accountants Stereotypes

Accounting is:	Min	Max	Mean	Std dev
Useful	0	28	20.497	5.391
Mechanical	0	21	15.132	3.916
Knowledge based	0	28	21.101	4.332
Dry	0	14	7.070	3.788
Accountants are:	**Min**	**Max**	**Mean**	**Std dev**
Dreary	0	35	15.809	6.500
Tragic	0	21	6.541	4.067
Lacking morals	0	28	10.983	4.974
Professional	0	28	18.125	4.935

Table 8. Multiple Regression on Accounting and Accountant Stereotypes

	Accounting	*Useful*	*Mechanical*	*Knowledge based*	*Dry*	*Accountants*	*Dreary*	*Tragic*	*Lacking morals*	*Professional*
	Coeff (t stat)	Coeff (t stat)	Coeff (t stat)	Coeff (t stat)	Coeff (t stat)	Coeff (t stat)	Coeff (t stat)	Coeff (t stat)	Coeff (t stat)	Coeff (t stat)
Account. studies	−0.084*	0.037	−0.081	0.018	−0.246*	−0.143*	−0.154*	−0.159*	−0.143*	0.074
	(−2.108)	(0.985)	(−1.814)	(0.409)	(−5.618)	(−3.385)	(−3.536)	(−3.636)	(−3.300)	(1.929)
Working experience	0.004	0.009	−0.017	0.043	−0.032	−0.065	−0.053*	−0.076	−0.054	0.005
	(−0.102)	(0.247)	(−0.382)	(0.965)	(−0.723)	(−1.508)	(−1.212)	(−1.719)	(−1.226)	(0.138)
Gender	−0.039	−0.034	−0.037	0.067	−0.107*	−0.103*	−0.114*	−0.055	−0.103*	0.010
	(−0.922)	(−0.861)	(−0.789)	(1.446)	(−2.304)	(−2.317)	(−2.491)	(−1.187)	(−2.255)	(0.235)
First-year students	0.043	0.060	−0.066	0.063	0.040	0.084*	0.117*	0.109*	0.024	−0.031
	(−1.055)	(1.571)	(−1.467)	(1.424)	(0.885)	−1.96	(2.647)	(2.457)	(0.548)	(−0.793)
Idealistic personality	0.405*	0.487*	0.216*	0.193*	0.079	0.006	−0.143*	−0.189*	−0.078	0.435*
	(−8.219)	(10.487)	(3.957)	(3.578)	(1.461)	(−0.121)	(−2.676)	(−3.513)	(−1.451)	(9.163)
Relativistic personality	0.120*	0.114*	0.039	0.083	0.062	0.307*	0.216*	0.189*	0.273*	0.145*
	(−2.486)	(2.525)	(0.729)	(1.576)	(1.174)	−6.03	(4.122)	(3.602)	(5.227)	(3.134)
Creativity self-perception	−0.004	0.032	−0.028	−0.025	0.000	0.031	−0.022	0.016	0.006	0.097*
	(−0.095)	(0.808)	(−0.614)	(−0.545)	(0.001)	(0.716)	(−0.484)	(0.343)	(0.131)	(2.442)
N	491	491	491	491	491	491	491	491	491	491
R	0.484	0.567	0.247	0.293	0.285	0.385	0.307	0.296	0.314	0.539
R square	0.234	0.321	0.061	0.086	0.081	0.148	0.094	0.088	0.099	0.291
F	21.106	32.680	4.492	6.467	6.122	11.992	7.170	6.645	7.571	28.309
Sig.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

* Significant at 5%

creativity best described them. Of the 30 adjectives, 12 of them implied lower creativity and were scored negatively. Thus the variable range was from minus 12 to plus 18.

3.3.3 Analysing Ethical Position Impact: ANOVA

A one-way between-groups analysis of variance was conducted to explore the impact of the different personalities according to their idealism and relativism on the perception of accounting work and accountants' personal characteristics (see **Table 9**). Based on Forsyth (1980) we can conclude there are four types of personality: situationist, absolutist, subjectivist, and exceptionist. We found statistically significant differences as shown on all of accounting and accountant personal characteristic perception variables except for accounting is dry. The effect size was calculated using eta squared ranges from small to medium effect according to the Cohen (1988) classification, in line with the sample size of our research. Welch and Brown-Forsythe robust tests were also conducted, supporting the results shown on the ANOVA (**Table 10**). Post-hoc comparations using the HSD test (**Table 11**) show statistically significant differences arising among ethical personality groups.

4. Results

4.1 Stereotypes of Accountants and Accounting

The results of the EFA carried out show the constructs for stereotypes relating to both accounting work and accountants' personal characteristics. Based on traits identified by Richardson (2015), 13 statements related to the perception of accounting work and 16 regarding the perception of accountants' personal characteristics are deemed significant and can be found on the constructs of the identified stereotypes in **Table 3** and **Table 5**.

Constructs for the accounting work are *useful, mechanical, knowledge based* and *dry*. As expected, we found evidence on the existence of stereotypes with a mixed perception of positive and negative traits, as it is perceived by students as a useful career that requires specific knowledge but is mechanical and dry.

The results of our analysis support the presence of different dimensions of stereotypical perceptions of accountants' personal characteristics: *dreary, tragic, professional, lacking morals* as we expected.

These results support our first hypothesis H1a and H1b and present empirical evidence of current perceptions of both accounting work and accountants' personal characteristics held by students. These perceptions include positive and negative traits (Richardson et al., 2015) and our results suggest that those traits relating to personal characteristics were more negative than those relating to accounting work, again in line with previous literature (Coate et al., 2003; Cory, 1992).

Table 9. Descriptive Statistics

		N	Mean	Std dev	Std error	95% Confidence interval for mean		Min	Max
						Lower bound	Upper bound		
Accounting is useful	Situationist	191	22.04	3.73	0.27	21.51	22.57	10.00	28.00
	Absolutist	103	21.61	4.05	0.40	20.82	22.40	10.00	28.00
	Subjectivist	87	20.64	4.13	0.44	19.76	21.52	11.00	28.00
	Exceptionist	134	17.34	7.39	0.64	16.08	18.60	0.00	28.00
	Total	515	20.50	5.39	0.24	20.03	20.96	0.00	28.00
Accounting is mechanical	Situationist	191	15.87	3.61	0.26	15.35	16.38	3.00	21.00
	Absolutist	103	15.53	3.74	0.37	14.80	16.26	3.00	21.00
	Subjectivist	87	14.57	3.63	0.39	13.80	15.35	0.00	21.00
	Exceptionist	134	14.14	4.39	0.38	13.39	14.89	0.00	21.00
	Total	515	15.13	3.92	0.17	14.79	15.47	0.00	21.00
Accounting is knowledge based	Situationist	191	22.19	3.69	0.27	21.67	22.72	4.00	28.00
	Absolutist	103	21.09	4.16	0.41	20.28	21.90	4.00	28.00
	Subjectivist	87	21.03	3.66	0.39	20.25	21.81	13.00	28.00
	Exceptionist	134	19.59	5.21	0.45	18.70	20.48	0.00	28.00
	Total	515	21.10	4.33	0.19	20.73	21.48	0.00	28.00
Accounting is dry	Situationist	191	7.01	3.76	0.27	6.48	7.55	2.00	14.00
	Absolutist	103	6.93	4.15	0.41	6.12	7.74	2.00	14.00
	Subjectivist	87	7.91	3.69	0.40	7.12	8.69	2.00	14.00
	Exceptionist	134	6.72	3.56	0.31	6.11	7.33	0.00	14.00
	Total	515	7.07	3.79	0.17	6.74	7.40	0.00	14.00
Accountants are dreary	Situationist	191	15.54	6.09	0.44	14.67	16.41	5.00	35.00
	Absolutist	103	14.08	6.76	0.67	12.76	15.40	5.00	35.00
	Subjectivist	87	18.34	6.30	0.68	17.00	19.68	5.00	35.00
	Exceptionist	134	15.88	6.56	0.57	14.76	17.01	0.00	35.00
	Total	515	15.81	6.50	0.29	15.25	16.37	0.00	35.00
Accountants are tragic	Situationist	191	6.29	3.80	0.27	5.75	6.83	2.00	21.00
	Absolutist	103	5.69	4.14	0.41	4.88	6.50	2.00	21.00
	Subjectivist	87	7.73	4.19	0.45	6.84	8.62	3.00	19.00
	Exceptionist	134	6.78	4.14	0.36	6.07	7.49	0.00	21.00
	Total	515	6.54	4.07	0.18	6.19	6.89	0.00	21.00
Accountants are lacking morals	Situationist	191	10.82	4.67	0.34	10.15	11.48	4.00	28.00
	Absolutist	103	9.96	4.89	0.48	9.00	10.91	3.00	25.00
	Subjectivist	87	12.82	4.73	0.51	11.81	13.83	4.00	26.00
	Exceptionist	134	10.82	5.35	0.46	9.91	11.74	0.00	23.00
	Total	515	10.98	4.97	0.22	10.55	11.41	0.00	28.00
Accountants are professional	Situationist	191	19.54	3.87	0.28	18.99	20.09	10.00	28.00
	Absolutist	103	18.64	4.29	0.42	17.80	19.48	9.00	28.00
	Subjectivist	87	18.18	3.33	0.36	17.46	18.89	6.00	25.00
	Exceptionist	134	15.66	6.50	0.56	14.55	16.77	0.00	28.00
	Total	515	18.12	4.94	0.22	17.70	18.55	0.00	28.00

Table 10. ANOVA Analysis Results

ANOVA						
		Sum of squares	gl	Mean square	F	Sig.
Accounting is useful	Between groups	1921.392	3	640.464	25.135	0.000
	Within groups	13046.464	512	25.481		
	Total	14967.856	515			
Accounting is mechanical	Between groups	278.994	3	92.998	6.250	0.000
	Within groups	7618.336	512	14.880		
	Total	7897.330	515			
Accounting is knowledge based	Between groups	535.099	3	178.366	10.001	0.000
	Within groups	9131.275	512	17.835		
	Total	9666.374	515			
Accounting is dry	Between groups	80.072	3	26.691	1.870	0.134
	Within groups	7309.084	512	14.276		
	Total	7389.156	515			
Accountants are dreary	Between groups	880.770	3	293.590	7.201	0.000
	Within groups	20874.873	512	40.771		
	Total	21755.643	515			
Accountants are tragic	Between groups	217.332	3	72.444	4.469	0.004
	Within groups	8298.966	512	16.209		
	Total	8516.298	515			
Accountants are lacking morals	Between groups	409.898	3	136.633	5.673	0.001
	Within groups	12331.996	512	24.086		
	Total	12741.894	515			
Accountants are professional	Between groups	1229.031	3	409.677	18.540	0.000
	Within groups	11313.810	512	22.097		
	Total	12542.841	515			

Therefore, our results support H1a: **There are separately identifiable stereotypes of accounting work, with positive and negative traits** and H1b: **There are separately identifiable stereotypes of accountants’ personal characteristics, with positive and negative traits.**

We found positive and statistically significant correlations between stereotypes, as *useful* and *mechanical*. The correlations are strongest for those statements related to the perceptions of accountants, particularly for those statements that imply a *negative* perception of both accounting and accountants. *Dry* is highly correlated with *dreary*, *tragic*, and *lacking morals*. Higher correlations between the negative perceptions show that negative perceptions are strongly related.

4.2. Drivers of Stereotypes

With the objective of understanding the drivers of the stereotypes that were identified in the previous analysis, we ran a regression model, and the results are shown in Table 8. We found that the main predictors of accounting stereotypes (R2 = 0.23, p < 0.01) are *previous accounting studies* and *personality*. When analysing the regression results for each of the factors

Table 11. Post-hoc Test

			Mean differences (I−J)	Std error	Sig.
Accounting is useful	Situationist	Absolutist	0.43	0.62	0.90
		Subjectivist	1.40	0.65	0.14
		Exceptionist	4.69*	0.57	0.00
	Absolutist	Situationist	−0.43	0.62	0.90
		Subjectivist	0.96	0.74	0.56
		Exceptionist	4.27*	0.66	0.00
	Subjectivist	Situationist	−1.40	0.65	0.14
		Absolutist	−0.96	0.74	0.56
		Exceptionist	3.30*	0.70	0.00
	Exceptionist	Situationist	−4.69*	0.57	0.00
		Absolutist	−4.26*	0.66	0.00
		Subjectivist	−3.30*	0.70	0.00
Accounting is mechanical	Situationist	Absolutist	0.34	0.47	0.89
		Subjectivist	1.29*	0.50	0.05
		Exceptionist	1.72*	0.43	0.00
	Absolutist	Situationist	−0.34	0.47	0.89
		Subjectivist	0.96	0.56	0.32
		Exceptionist	1.38*	0.51	0.03
	Subjectivist	Situationist	−1.29*	0.50	0.05
		Absolutist	−0.96	0.56	0.32
		Exceptionist	0.43	0.53	0.85
	Exceptionist	Situationist	−1.72*	0.43	0.00
		Absolutist	−1.38*	0.51	0.03
		Subjectivist	−0.43	0.53	0.85
Accounting is knowledge based	Situationist	Absolutist	1.10	0.52	0.14
		Subjectivist	1.16	0.55	0.14
		Exceptionist	2.60*	0.48	0.00
	Absolutist	Situationist	−1.10	0.52	0.14
		Subjectivist	0.06	0.61	1.00
		Exceptionist	1.49*	0.55	0.04
	Subjectivist	Situationist	−1.16	0.55	0.14
		Absolutist	−0.06	0.61	1.00
		Exceptionist	1.44	0.58	0.07
	Exceptionist	Situationist	−2.60*	0.48	0.00
		Absolutist	−1.49*	0.55	0.04
		Subjectivist	−1.44	0.58	0.07
Accounting is dry	Situationist	Absolutist	0.08	0.46	1.00
		Subjectivist	−0.89	0.49	0.26
		Exceptionist	0.29	0.43	0.90
	Absolutist	Situationist	−0.08	0.46	1.00
		Subjectivist	−0.98	0.55	0.29
		Exceptionist	0.21	0.50	0.97
	Subjectivist	Situationist	0.89	0.49	0.26
		Absolutist	0.98	0.55	0.29

			Mean differences (I–J)	Std error	Sig.
		Exceptionist	1.19	0.52	0.10
	Exceptionist	Situationist	−0.29	0.43	0.90
		Absolutist	−0.21	0.50	0.97
		Subjectivist	−1.19	0.52	0.10
Accountants are dreary	Situationist	Absolutist	1.46	0.78	0.24
		Subjectivist	−2.80*	0.83	0.00
		Exceptionist	−0.35	0.72	0.96
	Absolutist	Situationist	−1.46	0.78	0.24
		Subjectivist	−4.26*	0.93	0.00
		Exceptionist	−1.81	0.84	0.14
	Subjectivist	Situationist	2.80*	0.83	0.00
		Absolutist	4.26*	0.93	0.00
		Exceptionist	2.45*	0.88	0.03
	Exceptionist	Situationist	0.35	0.72	0.96
		Absolutist	1.81	0.84	0.14
		Subjectivist	−2.45*	0.88	0.03
Accountants are tragic	Situationist	Absolutist	0.60	0.49	0.61
		Subjectivist	−1.43*	0.52	0.03
		Exceptionist	−0.49	0.45	0.71
	Absolutist	Situationist	−0.60	0.49	0.61
		Subjectivist	−2.04*	0.59	0.00
		Exceptionist	−1.09	0.53	0.17
	Subjectivist	Situationist	1.43*	0.52	0.03
		Absolutist	2.04*	0.59	0.00
		Exceptionist	0.95	0.55	0.31
	Exceptionist	Situationist	0.49	0.45	0.71
		Absolutist	1.09	0.53	0.17
		Subjectivist	−0.95	0.55	0.31
Accountants are lacking morals	Situationist	Absolutist	0.86	0.60	0.48
		Subjectivist	−2.00*	0.63	0.01
		Exceptionist	−0.01	0.55	1.00
	Absolutist	Situationist	−0.86	0.60	0.48
		Subjectivist	−2.85*	0.71	0.00
		Exceptionist	−0.86	0.64	0.54
	Subjectivist	Situationist	2.00*	0.63	0.01
		Absolutist	2.86*	0.71	0.00
		Exceptionist	1.99*	0.68	0.02
	Exceptionist	Situationist	0.01	0.55	1.00
		Absolutist	0.86	0.64	0.54
		Subjectivist	−1.99*	0.68	0.02
Accountants are professional	Situationist	Absolutist	0.90	0.57	0.40
		Subjectivist	1.37	0.61	0.11
		Exceptionist	3.88*	0.53	0.00
	Absolutist	Situationist	−0.90	0.57	0.40
		Subjectivist	0.47	0.68	0.90

			Mean differences (I−J)	Std error	Sig.
		Exceptionist	2.98*	0.62	0.00
	Subjectivist	Situationist	−1.37	0.61	0.11
		Absolutist	−0.47	0.68	0.90
		Exceptionist	2.51*	0.65	0.00
	Exceptionist	Situationist	−3.88*	0.53	0.00
		Absolutist	−2.98*	0.62	0.00
		Subjectivist	−2.51*	0.65	0.00

* Mean difference is significant at 5%

(*useful, mechanical, knowledge based,* and *dry*), personality variables are the main predictors except for the *dry* perception. The variables significantly related to *dry* (R2 = 0.08, $p < 0.01$) are *previous accounting studies* and *gender*, with no effect of personality traits on this perception. Therefore, the main predictors of *dry* are *previous accounting studies* and *gender*, as a deeper knowledge of accounting improves students’ perceptions, reducing the negative image of accounting work as boring and uninteresting. Male students more often perceive accounting as a dry profession than female students do.

To conclude, the perceptions of *useful, mechanical*, or *knowledge based* are not affected by *gender, previous accounting studies* or *working experience*, but are only affected by personality variables, suggesting that the perception of accounting could be predicted only by personality and ethical position. Idealistic personality is the most relevant factor to explain the perception of *useful, mechanical* and *knowledge based*, and with a positive and statistically significant effect. According to Bryant et al. (2011) individuals high in idealism seek to minimize the harm to others, suggesting they tend to understand accounting as more useful, mechanical and knowledge based than those with lower idealism.

When analysing the regression results for perceptions of accountants (R2 = 0.15, $p < 0.01$), *previous accounting studies*, *gender*, *first-year students* and *relativistic personality* were found to be significant variables.

The stereotype of *dreary* (R2 = 0.09, $p < 0.01$) is significantly related to *previous accounting studies, working experience, gender, first-year studies, idealistic personality* and *relativistic personality*. Contact with accounting (with previous accounting studies and working experience) has a negative and statistically significant effect on the perception of *dreary* as we expected, as those students with previous studies of accounting or previous contact with the job market through internships or part-time employment are less likely to label accountants as dreary. In line with this, first-year students have a positive and significative effect, as these new university students lack accounting knowledge and have a more negative image of accountants.

Gender is also another predictor and male students tend to perceive accountants as dull and timid more often than female students. Finally, both idealistic and relativistic personality variables affect this perception, as students with lower idealism and higher relativism perceive *dreary* more frequently. Individuals with low idealism and high relativism reject moral rules, believing that moral decisions are subjective (Forsyth, 1980).

Similar results are found for accountants as *tragic* (R2 = 0.09, $p < 0.01$), and again the main predictors are *previous accounting studies, first-year students, idealistic* and *relativistic personality*. The effect of *previous accounting studies* and *first year* on the perception of *tragic* can be explained in terms of the ignorance of the role of the accountant, as there is a negative, and significant, effect of *previous accounting studies* and a negative and also significant effect of *first-year students*. The effect of personality is again significant, and *idealistic personality* has a negative and significant effect while *relativistic personality* has a positive and also significant effect.

For the factor *lacking morals* (R2 = 0.10, $p < 0.01$) the main contributor is *relativistic personality*, which has the largest and most positive contribution, followed by *previous accounting studies* and *gende*r. Individuals with higher relativistic personality consider situations as unique (Bryant et al., 2011), affecting the perception of accountants.

A deeper knowledge of the accountancy profession, measured by previous accounting studies, affects the image of accountants as *lacking morals* and of *being willing participants in corporate fraud*. Gender is also relevant in the prediction of the perception of *lacking morals*, which shows a negative and significant coefficient, meaning male students tend to consider accountants as *lacking morals* more frequently than female students.

Finally, the image of accountants as professional (R2 = 0.29, $p < 0.01$) can be explained mainly by personality traits, *idealistic personality* and *relativistic personality*, and also by *creativity self-perception*, concluding that the perception of accountants as professional can only be predicted by personality and that variables like *gender* or *previous accounting studies* are not making a significant contribution to the prediction of this stereotype. *Idealistic personality* is the most relevant driver with the higher contribution, presenting a positive co-efficient. Idealism describes individuals' attitudes toward the consequences of an action, and how these consequences affect the welfare of others (Elias, 2002). Those individuals with high idealism and high relativism reject moral rules and understand decisions are subjective (Forsyth, 1980).

Most of the relationships that we hypothesised in H2 about factors affecting the stereotypes are supported by our results. We found empirical evidence on the effect of *gender* and *previous knowledge* on the formation of stereotypes of both accounting work and accountants' personal characteristics. *Previous accounting studies* are relevant in the prediction of the perception *of dry, dreary, tragic*, and *lacking morals*. *Gender* is also significant in explaining the creation of the image of accounting and accountants as *dry*, *dreary*, and *lacking morals*. The creative personality only had a significant impact on the professional perception of accountants.

We found that increasing the contact with accounting and accountants, through studies or work experience, improves the perceptions particularly in those related to the *negative* stereotypes. Regarding accounting work, the only significant change found was on the perception of accounting as a boring activity, and this change is statistically significant. By contrast, the change is higher when we look at the stereotypes of accountants’ personal characteristics, concluding that the perceptions of accountants as dull, pathetic and fraud-related change significantly when students increase their contact and knowledge, as we expected.

In conclusion, H2 has been supported by the regression results: there are factors that affect the stereotypes of accounting work and accountants’ personal characteristics, such as gender, professional contact with the profession, or students’ personalities.

4.3 Impact of Personality and Ethical Position

Based on the effects of idealistic/relativistic detected in the regression model, we carried out an additional analysis to identify the effects of the ethical position on the perception of accounting work and accountants’ personal characteristics.

Following Forsyth (1980), there are four types of personality: situationist, absolutist, subjectivist, and exceptionist. Situationists (high idealism, high relativism) reject the application of universal moral principles. Subjectivists (low idealism, high relativism) reject moral rules and believe negative consequences do not necessarily imply an action is immoral. Absolutists (low relativism, high idealism) approve those actions resulting in positive consequences for all, and exceptionists (low idealism, low relativism) accept moral rules in principle but are willing to violate moral rules to avoid negative consequences.

Our ANOVA results show statistically significant differences (**Table 10**), for all the variables relating to perceptions of both accounting work and accountants’ personal characteristics except for *dry*, suggesting that ethical position has a strong effect on the image of both accounting work and accountants, and therefore, supporting our third hypothesis H3.

An additional post-hoc test was carried out to understand the different perceptions based on the ethical personality. As can be seen in **Table 11**, several statistically significant differences (shown in bold in that table) arise between groups, particularly significant is the difference in perception of accounting exhibited by the exceptionist group (low idealism and low relativism, accept moral rules but may violate moral rules to avoid negative consequences).

Finally, regarding the differences between groups relating to the perception of accountants' personal characteristics, the group that presents a significant different perception is the subjectivists group (with low idealism and high relativism, they are expected to reject moral rules and to believe negative consequences do not necessarily imply an action is immoral).

5. Discussion, Conclusions and Limitations

5.1 Discussion

This research, building on the work done by Richardson (2015) and Wells (2015b), provides empirical evidence that the stereotypes associated with accounting do have positive and negative dimensions linked to both the type of work carried out by accountants and their perceived personal characteristics [H1].

Furthermore, the study confirms significant factors contribute to the formation of these stereotypes like gender and previous exposure to either the subject of accounting or accounting practitioners [H2] while also providing evidence that a third factor, the ethical position of participants [H3], also plays an important role in how accountants' personal characteristics and accounting work are perceived. Each of these findings is discussed in this section.

Our results indicate that students perceived the work of accounting as mechanical but also knowledge based, while accountants were seen as both professional and dreary. Given the changes in accounting work driven by technology and efforts by the accountancy profession to improve the image of accountants, the lack of change in the perceptions suggests that the image of the accountancy profession is deeply rooted in the type of work carried out by accountants in the past (Byrne & Willis, 2005; Hunt et al., 2004; Jeacle, 2008; Parker, 2001).

The second objective was to identify factors that have a notable impact on the formation of the perceptions of accounting work and of accountants' personal characteristics. Gender and previous study of accounting were two key factors that accounted for significant differences in the perceptions held by participants of accounting and accountants [H2], particularly in countering the negative stereotypes of accountants. We found that female students were more likely to have a positive view of accountants than their male colleagues. The findings from our factor analysis, that the negative aspects of the prevailing stereotypes have less influence on women's perceptions, are consistent with prior research (Hunt et al., 2004).

The findings relating to the impact that prior exposure to the subject has on perceptions of accounting work are also relevant. Given that a significant body of research highlights that the nature and extent of prior exposure to accounting and accountants can have a positive effect on the perceptions held by students (Caglio & Cameran, 2017; Navallas et al., 2017), then educators and professional bodies may need to invest more effort in developing and deploying better stratagems to close the gap between the real role of the 21st-century accountant and the perceptions of what this role entails and the skill sets required to perform it.

The third and final objective of this research was to test whether students' ethical position results in significantly different perceptions of both accounting work and accountants' personal characteristics [H3].

Students were asked to indicate how strongly they agreed, using the Likert scale of 1–7, with 20 statements equally split between individualistic and relativistic to determine which of the four ethical ideologies was the best fit for respondents' own moral philosophy. We found that gender did indeed contribute to the perception that accountants lacked morals, with male students more likely to view the ethical behaviour of accountants less favourably than females as previously found by Caglio and Cameran (2017).

We further found that participants' perceptions of accountants' personal characteristics and accounting work were strongly influenced by their own ethical position, supporting our H3. The effect of ethical position on the image of accounting may be explained to some extent by the perception of accounting as, far from being a precise, technical and objective process, it is instead open to manipulation such as earnings management.

Respondents whose ethical philosophy was best categorised as absolutist have a more positive view of the moral behaviour of accountants than respondents whose ethical philosophy fell into the category of subjectivist. Respondents whose ethical philosophy was best categorised as situationist had a more favourable view of the usefulness of accounting than respondents whose ethical philosophy fell into the category of exceptionist. These findings are consistent with Elias (2002) who concludes that perception of accounting manipulation is influenced by the ethical ideology and position an individual subscribes to.

It is notable that the only perception unaffected by the ethical position of respondents is that accounting is boring and uninteresting.

5.2 Conclusions

Considering all three elements of this study, it is clear that while stereotypes associated with accounting work and with accountants' personal characteristics have both positive and negative aspects, these stereotypes can be positively influenced by contact with the accountancy profession and by previous accounting studies (Albrecht & Sack, 2000; Caglio & Cameran, 2017). It is becoming obvious that the prevailing stereotypes are not consistent with the shift in the nature of the accountant's work in the 21st century, and there is a mismatch between (on the one hand) the perceived duties and skills and (on the other hand) the real accounting career profile. The consequences of not tackling these negative perceptions may prove costly for the profession (Jeacle, 2008).

This study contributes to the literature by building on existing studies of stereotypes associated with the accountancy profession by providing empirical evidence of both negative and positive elements linked to the work done by accountants and to the personal characteristics of accountants. The study also contributes by providing empirical evidence on the factors that play a role in the formation of these perceptions. This evidence is important given the changed nature of the work of accountants and the failure of this changed work to have any noticeable impact on perceptions held by accounting and business students. More research on these factors (and whether they could be harnessed to generate a more accurate depiction of accounting and accountants) would be a fruitful future line of inquiry.

Our study is relevant to the accountancy profession because inaccurate perceptions will lead to the recruitment of students who lack the required skills and capabilities to perform the duties required (Usoff & Feldmann, 1998), implying in the long-term a self-fulfilling prophecy (Friedman & Lyne, 2001). Professional bodies should increase their efforts to communicate the duties performed by accountants in the 21st century (Albrecht & Sack, 2000), enhancing their contacts with students (Del Campo et al., 2016) as more effective ways to improve students’ perceptions.

Consistent with prior research (Caglio & Cameran, 2017; Jackling & Calero, 2006; Jeacle, 2008), the findings of our study suggest that the accountancy profession (in the broadest sense of educators, practitioners, and professional bodies) has yet to see its efforts to inform potential students of the reality of what a 21st-century career in accounting entails bear fruit in the form of updated perceptions of accounting work and accountants’ personal characteristics.

5.3 Limitations

The results of the study should be interpreted in light of some limitations. Firstly, students were bounded by the choices in the questionnaire and did not have the opportunity to articulate in other terms their individual perceptions of accountants’ personal characteristics and accounting work.

Secondly, our study is set in one university and therefore results and conclusions cannot be regarded as being generally applicable. These limitations could be overcome by extending the survey to business students in multiple third-level institutions and including a selection of open-ended questions in the survey.

Thirdly, survey research cannot establish cause and effect relationships and it is not possible to conclude that the factors found to be significantly associated with stereotypes are causal factors.

Further, given the limitations of quantitative work, it is not possible to ascertain why females hold a more favourable view of aspects of accounting or why females are less influenced by occupational stereotypes. Nor did this research set out to explicitly explore the transmission mechanisms by which stereotypes come into existence. We also acknowledge that, while first-year and non-first year university students were surveyed, the study was not designed as a longitudinal study. Such a study could provide an opportunity to gain a deeper understanding of whether perceptions held by first-year university students change (and to what extent) as a result of exposure to all facets of accounting and to accounting practitioners over their degree course.

This study could lead to several future studies. Firstly, future research could focus on the contrast between our research findings with those collected in other universities and regions. Secondly, we think that an interesting avenue for future research could be to study the evolution of the perceived image of accounting and accountants over the duration of their college education, for a sample of undergraduate students, to understand how the image may change after taking, or not taking, certain accounting subjects. Thirdly, we consider a wider study could be carried out to comprehend the existing stereotypes of the accountancy profession among other social groups, not just students. Another future study could cover the process by which stereotypes are created. And finally, considering the relevance ethical position has on the perception of the accountancy profession shown in this paper, we think this relationship should be the object of a deeper study.

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