Assessing the Impact of Accounting Perceptions on Accounting Major Choice Based on Students' Personal Characteristics

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Abstract

In the paper, the impact of selected popular perceptions about accounting and the accounting major on the accounting major choice was assessed for the sample of undergraduate business school freshmen. Rather than observing differences between accounting majors' and non-accounting majors' perceptions themselves, a novel approach was used, focused on the observation of differences between accounting majors' and non-accounting majors' personal characteristics, deemed as relevant for their fit with selected popular accounting perceptions. Regression coefficients obtained from regressing these personal characteristics on the accounting major choice variable were used as evidence for the impact of observed accounting perceptions on accounting major choice. Results suggest an important impact of some of the popular accounting perceptions on students' decision whether to major in accounting or not.

Introduction

For some time now the accounting profession has been faced with a serious shortage of manpower, both in quantity and quality. One of the frequently discussed reasons for this is also lack of interest among students because of widespread unattractive perceptions of accounting and accountants (e.g. Albrecht & Sack, 2000; Hunt et al., 2004), perhaps nowhere more evident than in popular stereotypes such as beancounter, pencil-pusher, and number-cruncher. Although several studies can be found, confirming the pervasiveness of such perceptions both, in the general public and among business students (e.g. Caglio et al., 2019; Friedman & Lyne, 2001; Byrne & Willis, 2005), little empirical evidence exists about their actual impact on business students' decision to major in accounting or not. Few perceptual studies are identifying/testing differences in accounting perceptions between accounting and non-accounting business students, few studies

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regressing these perceptions on business students' decision whether or not to major in accounting, and that is about it. Results generally confirm some statistically significant differences in accounting perceptions between accounting and non-accounting students, as well as statistically significant correlations between these perceptions and students' decision to choose accounting as their college major, but it is our belief, that so obtained evidence is not a good indicator of the impact of popular accounting perceptions on students' decision whether or not to major in accounting.

First, students' perceptions about accounting in these studies are mostly measured independently of the same students' perceptions about their other college major choice alternatives. Because the choice is always among a finite set of alternatives, it is not perceptions about college majors on their own that guide students' choice, but perceptions about an observed college major relative (in comparison) to other available options. For example, perception about accounting involving a lot of math will not act as a deterrent against choosing accounting as a college major, if the student holds about the same perception also for all other alternatives he or she is choosing among.

Second, in cases when the average of observed perception among accounting and non-accounting majors is about the same, no statistically significant relationship between observed perception and accounting major choice may falsely be interpreted as no impact of observed perception on accounting major choice, where in fact there might be a strong impact. This is because such an approach does not take into account, that the same perception may have significantly different, even opposite effects on different individuals, depending on their personal characteristics (personality traits, competencies, workplace preferences, values, likes/dislikes, etc.). For example, the same perception about accounting as involving a lot of math can reasonably be expected to have an attraction effect on individuals with good math competencies and affinity to working with numbers, but at the same time a deterrence effect on individuals with weak math competencies and strong math apprehension. In both cases, the perception of accounting involving a lot of math has a strong impact on the decision-making process of observed individuals, but in the case of approximately the same average strength of the perception in both groups, directly regressing it on accounting major choice will show no statistically significant relationship. This is because the effect is not reflected by the relationship of accounting major choice with observed perception but by the relationship of accounting major choice with the level of an individual's math competency. Consequently, the strength of the relationship between accounting major choice and personal characteristics describing individuals expected to be attracted or deterred by observed accounting perception is a better indicator of the impact of such a perception on accounting major choice than the strength of the relationship between accounting major choice and observed perception itself.

Those are the key reasons why the direct regression of accounting perceptions on students' decision to major in accounting or not is a flawed approach to measuring the impact of popular accounting perceptions on accounting major choice. Therefore, an alternative approach is proposed in this paper. One, based on identifying personal characteristics (personality traits, values, skills, competencies, likes/dislikes, work environment preferences, etc.) deemed as relevant for an individual's fit with selected popular accounting perceptions, and regressing them on the students' decision to major in accounting or not. Following the person-job-fit theory (e.g. Edwards, 1991; Kristof-Brown, 2005) it is reasonable to expect, that popular perceptions about accounting will act as an attractor to those, whose personal characteristics match/fit them closely, and as a repellant (deterrence) to those, whose do not. If this is true, then regression coefficients obtained from regressing these personal characteristics on students' decision whether or not to major in accounting might be used as a good indicator and evidence for the impact of observed perceptions on such a decision, without previously discussed insufficiencies of observing students' perceptions directly.

The main contribution of this paper to the existing research on accounting perceptions and accounting major choice is that it introduces a novel approach to the estimation of the impact of accounting perceptions on the student's decision whether to major in accounting or not. The remainder of the paper is structured as follows. First, the literature review is presented identifying the most pervasive general public's and business students' perceptions of accounting and accountants. Then, information about the participants of the study is presented, followed by the methodology section, results, discussion, and conclusion.

Literature Review on Perceptions of Accounting and Accountants

Empirical studies show that perceptions people hold about accounting and accountants cluster into a

relatively small number of distinct stereotypical representations (depictions/schemas/portrayals) that can also be found in popular and professional literature, movies, various media, etc. For example Carnegie & Napier (2010) found that from the scholarly literature on the popular perceptions of accountants and accounting, two major and broadly distinctive accounting stereotypes can be identified, first being labeled as »traditional accountant stereotype« (also reffered to as »beancounter accountant stereotype«), portraying accountants as trustworthy, narrow-minded, methodical, conservative, dull, boring, joyless, nerdy, pedantic, uncommercial and unimaginative number-crunchers and pencil-pushers (e.g. da Costa et al., 2020; Parker & Warren, 2017; Carnegie & Napier, 2010; Jeacle, 2008; Hunt et al., 2004; Friedman & Lyne, 2001; Parker, 2000; Bougen, 1994), and the second being labeled »business professional stereotype« (also referred to as »colourful accountant stereotype«), portraying accountants as professionals with characteristics of the executives, managers and entrepreneurs - a proactive, cool and much more creative than traditional accountants, but also of a dubious moral character, frequently associated with earnings manipulation, off-balance-sheet financing manoeuvres and corruption (e.g. Carnegie & Napier, 2010; Jeacle, 2008; Bougen, 1994).

Richardson et al. (2015) further analyzed the most salient stereotypes about accounting and accountants to develop a more refined framework of external perceptions, that distinguishes one stereotypical image from another. Their framework is constructed on two broad criteria that comprise accountants' personal characteristics and characteristics of accounting as a line of work. This way, authors identified four distinct stereotypical images of accountants – two positive (scorekeeper and guardian) and two negative (beancounter and entrepreneur) subcategories of the broader bookkeeper (i.e. traditional accountant) and business professional (i.e. contemporary accountant) stereotypes.[1]

According to Richardson et al. (2015), the key difference between scorekeeper and beancounter subtypes is in personal characteristics, attributed to them. While scorekeeper is characterized as vigilant, methodical, exact, conservative, honest, trusted, etc. (from the accounting profession and users' point of view desirable personal characteristics), beancounter is characterized as dull, boring, shallow, unimaginative, weak, conformist, passive, lifeless, asocial, inept, awkward and obsessive (from accounting profession and users point of view undesirable personal characteristics).

Personal characteristics are also the key difference between the guardian and entrepreneur subtypes. While guardian is characterized by positive personality traits such as ethical, professional, versatile, capable, communicative, technically competent, with strong managerial skills, trusted, good leader, vigilant, exact, honest, sincere, caring, brave, etc., entrepreneur is characterized as sinister and manipulative, untrustworthy and possibly corruptible (Richardson et al., 2015).

Perceptual research generally confirms the widespread presence of traditional accountant stereotypes among students and the general public (e.g. Caglio et al., 2019). This is important because individuals may select careers according to the stereotypes they hold of persons in those careers (DeCoster, 1971). Students consider whether they would want to work with such people and how being accountants themselves would affect their self-image (Hunt et al., 2004). Nonetheless, other mental representations/schemas closer to Carnegie's and Napier's (2010) business professional type of accountant can also be found. In their study of perceptions about accountants among students and practicing accountants Caglio et al. (2019) for example found, that the most common image among participants was the one of an accountant as a modern professional (35.7 percent of all respondents), similar to business professional stereotype in Carnegie and Napier (2010), but without negative traits such as manipulativeness and lack of trustworthiness.[2]

The second most common image of accountants in the Caglio et al. (2019) study was the image of »*the plain vanilla professional*« (34.1 percent of all respondents). Authors described this plain vanilla professional as one that includes nuances that are neither particularly favorable nor unfavorable – »*... not boring, but not glamorous, moderately successful, with the capacity to bend the rules a little.*« (Caglio et al., 2019, p. 861).

The beancounter image was the least frequently reported (30.2 percent of all respondents), but further analysis showed that the frequency of identified mental representations/schemas differed among different groups of participants. The beancounter was much more

[1] Scorekeeper and beancounter are subtypes of the bookkeeper stereotype, while guardian and entrepreneur are subtypes of the business professional stereotype.

[2] The modern accountant schema identified in their study had the highest score for honesty, the same as the guardian schema in Richardson et al. (2015).

common among students (37.4 percent of student respondents) than among practitioners (13.7 percent of practicing accountant respondents). Also, the beancounter stereotype was much stronger among students in accounting-unrelated disciplines, such as architecture, engineering, and the arts (43.3 percent), than among students of business and economics (32.6 percent). Such results led authors to conclude, that »*The traditional and extreme 'beancounter' stereotype is more deeply rooted in those who have distant relationships with accountants, while those who have closer, personal interactions with 'real' accountants recognize a plurality of nuances.*« (Caglio et al. 2019, p. 850).

Since beancounter, number-cruncher, and pencil-pusher are so-called work-related labels/stereotypes of accountants, it is not surprising that they have also been found to dominate the perceptions about accountants' work as well. There are several studies, reporting accounting line of work being frequently perceived as strongly numerically and rules-oriented, administrative/clerical by nature, repetitive with lots of routine, not particularly exciting and creative, solitary, etc., confirming bean-counting, number-crunching, and pencil-pushing stereotypes are strongly represented in perceptions of students and other important groups (for example teachers and career advisers), as well as the general public (e.g. Wells, 2015; Baxter & Kavanagh, 2012; Byrne & Willis, 2005; Saemann & Crooker, 1999). Many attribute this to an extremely narrow, reductionist view of accounting as a line of work, reduced only to book/record-keeping, preparation of financial reports, and auditing (e.g. Bougen, 1994), while other, more exciting aspects/dimensions of accounting as a profession are overlooked. Perhaps nowhere is that more evident than in Holland's (1966) categorization of accounting in the conventional occupations category, which Holland (1966) defined as "clerical work" with clerical skills as the core competency. In his self-directed search instrument (1979 version) all accounting jobs were categorized as primarily conventional - a classification that includes bookkeepers, budget reviewers, court stenographers, bank tellers, inventory controllers, financial analysts, cost estimators, payroll clerks, bank examiners, and tax experts (Chen et al., 2012), basically conflating accounting with bookkeeping.[3]

Based on the literature review, the perceptions about accounting as a line of work and as a college major in Table 1 were identified as the most pervasive in the general public as well as among business students.

Table 1

Popular perceptions about accounting as a line of work and a college major

	Perceptions	Evidence for the perceptions
1.	Mathematical-like, lots of working with numbers, calculations, methods, rules, and procedures.	- Perceptual studies (e.g. Meixner et al., 2009). - Number-cruncher stereotype.
2.	Clerical, secretarial-like (desk) job.	- Holland's model of occupational choice (e.g. Holland, 1966). - Pencil-pusher stereotype.
3.	Routine, monotonous, repetitive work.	- Perceptual studies (e.g. Baxter & Kavanagh, 2012). - Holland's model of occupational choice (e.g. Holland, 1966). - Beancounter and pencil-pusher stereotypes.
4.	Solitary work (environment), little interaction with others.	- Perceptual studies (e.g. Saemann & Crooker, 1999).
5.	Uncommercial, not likely to result in wealthiness.	- Beancounter stereotype.
6.	Challenging to learn, above average demanding (difficult) business college major.	- Perceptual studies (e.g. McGuigan & Weil, 2011; Enget et al., 2020).

Source: Authors' compilation

Participants

Data for the study were obtained via paper survey from undergraduate students of the Bachelor's professional study program »Business Administration« at the Faculty of Economics and Business at the University of Maribor (FEB). Participants were students, attending the introductory accounting course. The introductory

[3] Reardon (2001; as cited in Chen et al., 2012), summarised the description of the »conventional« (C) work category as follows: »*The Conventional (C) type generally likes to follow orderly routines and meet clear standards, avoiding work that does not have clear directions. The C type is described as conforming, conscientious, careful, efficient, inhibited, obedient, orderly, persistent, practical, thrifty, and unimaginative.*«.

accounting course is a course that takes place in the spring semester (February to June) of the first year of the undergraduate program and is obligatory for all students at the Business Administration Bachelor's professional study program of the FEB. Of the 187 students participating in the survey, 133 were freshmen (which is around 47 % of all freshmen enrolled in that program at the time of the study), while the rest were either sophomores, who had not yet passed the introductory accounting course exam and were therefore attending lectures for the second time, or students repeating a first year of their study because they haven't met the conditions for advancement to the second year.

Only the responses of 133 freshmen were used for this study. Responses of sophomores and repeating students were excluded to exclude the impact of any systematic differences that might exist between those groups of students and freshmen.

Of the 133 freshmen, 29 have chosen accounting as their major, while the remaining 104 chose one of the remaining 7 majors of the program. 73 participants had already attended an accounting course in their high school, while for others, the introductory accounting course was the first time they met with accounting. 93 participants were women (of which 22 majoring in accounting), 39 were men (of which 7 majoring in accounting), and 1 identified as »other«. All participating students had the same lecturer.

The survey took place in May 2023, shortly before the official presentation of different college majors at the end of the month. At that time, the majority of the introductory accounting course lectures were already finished, while the first exam was scheduled for June.

Methodology

First, personal characteristics deemed as relevant for students' fit with selected accounting perceptions were identified. Each of them was then tested separately for its impact on accounting major choice. For this, binary logistic regression with the individual personal characteristics as independent and accounting major choice as dependent variable was performed for each of the identified personal characteristics separately. Obtained regression coefficients were then used as indicators for the impact of observed perceptions on students' decision whether to major in accounting or not. Finally, all personal characteristics with statistically significant individual impact were entered into the same model and tested for their combined effect on students' decision whether or not to major in accounting.

Identification of Relevant Personal Characteristics

Based on the perceptions from Table 1, personal characteristics in Table 2 were identified as relevant for the level of one's fit with accounting as a line of work and as a college major.

Table 2

Key personal characteristics of individuals, expected to be attracted/repelled by observed perceptions about accounting

	Perceptions	Relevant personal characteristics	Rationale
1.	• Mathematical-like, lots of working with numbers, calculations, methods, rules, and procedures. • Clerical, secretarial-like (desk) job. • Challenging to learn, above average demanding (difficult) business college major.	• Math competencies and affinity for working with numbers. • Affinity for desk jobs and office work environments. • Good, diligent student.	It is reasonable to expect that those with more of these personal characteristics will be attracted by observed perceptions of accounting while those with less of them or opposite personal characteristics will be repelled.
2.	• Routine, monotonous, repetitive work. • Uncommercial, not likely to result in wealthiness. • Solitary work (environment), little interaction with others.	• Seeking excitement. • Seeking opportunities for creativity and innovation. • Value orientation towards money and wealth. • Extraversion	It is reasonable to expect that those with more of these personal characteristics will be repelled by observed perceptions of accounting while those with less of them or opposite personal characteristics will be attracted.

Source: Authors' compilation

Measurement

Items from four instruments were utilized to measure personal characteristics (personality traits, competencies, job/work environment preferences, values, etc.), selected to be tested for their impact on students' choice of accounting as a college major.

The first instrument consisted of a list of items, developed by authors to measure the extent to which individuals identify themselves with selected personal characteristics. Each item described a different personal characteristic of an imaginary person and participants had to answer to what extent they found that person similar to themselves. The strength of the self-assessed similarity was used as an indicator of one's identification with and therefore possession of the observed characteristic.

The second instrument consisted of a list of items, developed by authors to measure students' job and work environment preferences. The instrument consisted of pairs of opposite job and work environment characteristics, and for each pair participants had to choose the preferred one.

The third and fourth instruments were the 60 items Hexaco Big Six Personality Inventory-Revised (Ashton & Lee, 2009) for the measurement of Big Six personality traits and Schwartz's 21 items ESS21 (PVQ21) instrument for the measurement of personal values (Schwartz, 2021). Table 3 contains detailed information about how each variable utilized in the study was measured.

Table 3
Variables and their measurement

Personal characteristic	Measurement
Accounting major choice. Variable label: AccountingMajorChoice	Binary variable with values 1 for accounting majors and 0 for non-accounting majors.
Math competencies and affinity to working with numbers. Variable label: Math CompetencyAffinity	First, the average of the self-reported final high-school math grade (Appendix item A2) and the self-reported midterm business math test grade (Appendix item A3) was calculated. Since the high-school grade range was from 2 to 5 and the midterm business math test grade range was from 0 to 15 points, both variables were standardized (normalized) before averaging. Math grade average was then combined with a self-assessed level of math competencies and affinity to working with numbers (Appendix item B3) and self-reported attitude towards math (Appendix item A4) into a single factor measuring one's level of math competencies and affinity to working with numbers. AVE = 74.266 Cronbach's alpha = 0.775. Composite reliability = 0.897.
Affinity for desk jobs and office work environments. Variable label: OfficeDeskJobAttitude	Self-assessed affinity for office work environments (Appendix item B11), self-reported preference for lots of vs. little office work (Appendix item C3), and reversed score for self-assessed aversion to desk work (Appendix item B6) were combined into a single factor measuring one's affinity for desk jobs and office work environments. AVE = 62.626. Cronbach's alpha = 0.657. Composite reliability = 0.830.
Extraversion Variable labels: 1. SocialSelfEsteem 2. SocialBoldness 3. Sociability	1. Social self-esteem. The sum of items 4, 28R*, and 52R from the 60-item version of Hexaco Big Six Personality Inventory. AVE = 63.346. Cronbach's alpha 0.704. Composite reliability = 0.838. 2. Social boldness. The sum of items 10R, 34, and 58 from the 60-item version of Hexaco Big Six Personality Inventory with the addition of the reversed score for self-assessed level of aversion to public speaking (Appendix item B7) to improve the reliability of the measure. AVE = 56.088. Cronbach's alpha 0.735. Composite reliability = 0.836. 3. Sociability vs. individualistic behavioral tendencies. The sociability facet of the original 60-item version of Hexaco Big Six Personality Inventory (sum of items 16 and 40) was combined with self-assessed communicativeness (Appendix item B2), preference for work environments with lots of vs. little teamwork and interactions with others (Appendix item C2), and the reversed score for self-assessed individualism (Appendix item B10), into a single factor, measuring one's level of sociability vs. individualistic

Continuation of Table 3
Variables and their measurement

Personal characteristic	Measurement
	behavioral tendencies. AVE = 61.012. Cronbach's alpha = 0.765. Composite reliability = 0.862.
Value orientation towards money and wealth. Variable label: MoneyWealthOrientation	Greed items of the 60-item version of Hexaco Big Six Personality Inventory (items 18R and 42) and value orientation towards money and wealth item of ESS21 Value Scale (item 2) were combined into a single factor measuring one's value orientation towards money and wealth. AVE = 73.287. Cronbach's alpha = 0.806. Composite reliability = 0.892.
Seeking thrill and excitement. Variable label: SeekingThrillExcitement	ESS21 Value Scale – Stimulation (sum of items 6 and 15). AVE = 76.989. Cronbach's alpha = 0.697. Composite reliability = 0.870.
Seeking opportunities for creativity and innovation. Variable label: SeekingCreativityOriginality	Self-assessed creativity and innovativeness (Appendix item B1), self-assessed preference for work environments with lots of vs. little need for creativity and original ideas (Appendix item C1), and orientation towards creativity and originality item of ESS21 Value Scale (item 1) were combined into a single factor measuring one's tendency for creativity and innovation. AVE = 66.985. Cronbach's alpha = 0.751. Composite reliability = 0.858.
Good/diligent student. Variable labels: 1. SelfAssessedDiligence 2. PassedExams	1. Average of self-assessed orderliness and meticulousness (Appendix item B4), diligence (Appendix item B9), and studiousness (Appendix item B8). AVE = 64.078. Cronbach's alpha = 0.705. Composite reliability = 0.842. 2. Reversed self-reported number of jet unfinished first semester exams (Appendix item A5).

Note: * The letter R next to the item's number denotes that the reversed score of the item was used.
Source: Authors' compilation

Results

In Table 4 results of binary logistic regression analyses of the impact of each observed personal characteristic on accounting major choice are reported. This way, personal characteristics with individually significant relationships (impact) on accounting major choice were identified for further analysis. Five observed personal characteristics were identified as having a statistically significant impact on accounting major choice as the dependent variable. All predictor variables were standardized (normalized) before being entered into regression models.

The full working sample consisted of 133 participants' responses, but because of some missing answers, the number of observations is not the same for all observed predictor variables. For example, for the MathCompetenciesAffinity variable, there are only 117 observations, mainly because some students did not report their midterm business math test results.[4]

Table 4
Results of binary logistic regression analyses of the impact of selected individual personal characteristics on accounting major choice

	Predictor (independent) variable	N	B	S.E.	Wald	Sig.	Exp(B)	Nagelkerke R Square	Chi-square	-2Log likelihood
1	MathCompetencyAffinity	117	0.987	0.279	12.509	<0.001	2.683	0.189	15.569	110.839
2	SocialBoldness	133	0.006	0.211	0.001	0.979	1.006	0.000	0.001	139.496
3	SocialSelfEsteem	133	0.145	0.219	0.441	0.507	1.156	0.005	0.452	139.044
4	Sociability	133	-0.106	0.209	0.259	0.611	0.899	0.003	0.258	139.238
5	OfficeDeskJobAttitude	132	0.497	0.228	4.726	0.030	1.643	0.058	5.079	133.923
6	MoneyWealthOrientation	133	-0.805	0.237	11.533	<0.001	0.447	0.145	13.136	126.360
7	SelfAssessedDiligence	133	0.706	0.248	8.067	0.005	2.025	0.104	9.290	130.206
8	SeekingCreativityOriginality	132	-0.073	0.211	0.119	0.730	0.930	0.001	0.119	138.884
9	SeekingThrillExcitement	128	-0.036	0.216	0.029	0.866	0.964	0.000	0.029	134.454
10	PassedExams	133	1.274	0.366	12.086	<0.001	3.575	0.199	18.399	121.097

Source: Authors' estimation

[4] Midterm business math test is not obligatory so not all students attend it.

In Tables 5, 6, and 7 results of the multiple binary logistic regression analysis of the impact of selected personal characteristics on accounting major choice are reported. Only personal characteristics, previously identified as individually statistically significantly related to accounting major choice, were included as predictors. Also, the variable of gender was added to control for its possible effects. No statistically significant relationship between participants' gender and accounting major choice was detected.

Table 5

Results of the multiple binary logistic regression analysis of the impact of selected personal characteristics on accounting major choice

	Predictor (independent) variable	N	B	S.E.	Wald	Sig.	Exp(B)
1	Gender	115	-0.193	0.682	0.080	0.777	0.824
2	MathCompetencyAffinity	115	0.389	0.333	1.366	0.243	1.476
3	OfficeDeskJobAttitude	115	0.432	0.305	2.010	0.156	1.540
4	MoneyWealthOrientation	115	-0.881	0.332	7.036	0.008	0.414
5	SelfAssessedDiligence	115	0.707	0.331	4.549	0.033	2.027
6	PassedExams	115	1.528	0.492	9.651	0.002	4.609

Source: Authors' estimation

Tabela 6

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	43.132	6	<0.001
	Block	43.132	6	<0.001
	Model	43.132	6	<0.001

Source: Authors' estimation

Tabela 7

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	82.216	0.313	0.471

Source: Authors' estimation

Table 8

Classification Table

Observed			Predicted		
			Accounting major choice		
			0	1	Percentage Correct
Step 1	Accounting Major Choice	0	82	6	93.2 (specificity)
		1	13	14	51.9 (sensitivity)
	Overall Percentage			70.0 (precision)	83.5 (accuracy)

Note: The cut value is 0.500.

Source: Authors' estimation

In Table 8, the classification table (confusion matrix) is presented reporting the number of correctly and incorrectly classified cases by the observed model. In addition to accuracy as the most commonly used overall performance measure for classification models, the F1 score was also calculated (Table 9). This is because, in imbalanced datasets such as ours, accuracy as an overall performance indicator is misleading, since it tends to favour the majority class at the expense of the minority class. F1 score does not have this problem, since it is calculated as the harmonic mean of the precision and recall (sensitivity) scores[5], and as such conveys a balance between the two. To evaluate the overall performance of the model, the F1 score for the model was compared to the F1 score of a dummy classifier, utilized as a baseline.

Table 9

F1 score

Dummy classifier	0.358[6]
Model	0.596
Difference	0.238

Source: Authors' estimation

Discussion and Conclusion

Results show that out of ten observed personal characteristics as independent variables, five have no statistically significant relationship with accounting major choice as dependent variable. Three of them (namely social self-esteem, social boldness, and sociability) are facets of the personality trait extraversion,

[5] F1 score = 2 x (Precision x Recall) / (Precision + Recall).

[6] F1 score for a dummy classifier (i.e. baseline) = 2r / (r+1); where r = marginal probability p(y = 1).

believed to differentiate between people seeking and people avoiding social interaction/contact. If this is true, then the finding of no statistically significant relationship with accounting major choice can be interpreted as an indicator (evidence), that perceptions of accounting as solitary work (environment) have no significant impact on observed students' decision whether or not to major in accounting. If they had, then following person-job-fit theory this should be reflected in the statistically significant relationship of extraversion with an accounting major choice since solitary work (environments) require less social interaction than collaborative work (environments) and, if an important factor in one's decision making, should attract more introverts than extraverts. Since no such relationship was found, following person-job fit theory, the most plausible explanation for such a finding is that the perception of accounting as a solitary work (environment) does not have an important bearing on observed students' decision whether or not to choose accounting for their college major.[7]

The remaining two personal characteristics with no statistically significant relationship to accounting major choice are value orientation towards thrill and excitement and value orientation towards creativity and originality, believed to differentiate between people valuing and seeking opportunities for the thrill, excitement, creative expression, and originality, and people valuing stability, predictability and avoiding surprises. If this is true, then the finding of no statistically significant relationship with accounting major choice can be interpreted as an indicator (evidence), that perceptions of accounting as involving lots of routine, monotonous, and repetitive tasks have no significant impact on observed students' decision whether or not to major in accounting. If they had, then following person-job-fit theory this should be reflected in the statistically significant relationship of students' value orientations towards thrill, excitement, creativity, and originality with accounting major choice, since jobs/work, involving lots of routine, monotonous and repetitive tasks, does not offer a lot of opportunities for thrill, excitement, creativity and originality and, if important factor in one's decision making, this should act as a deterrence to those with more of these values compared to those with less of them. Since no such relationship was found, following person-job fit theory, the most plausible explanation for such a finding is that perception of accounting as involving lots of routine, monotonous, and repetitive tasks does not have an important bearing on observed students' decisions whether or not to choose accounting for their college major.

The remaining five observed personal characteristics all had statistically significant relationships with accounting major choice, but of various strengths and also different directions. The strongest positive relationship with accounting major choice was found for the number of successfully passed first-semester exams, which was used as a proxy indicator of one's diligence and capacity as a student. Such a result indicates that an accounting major attracts students, who are above average diligent, and study capable, and repels students, who are struggling or slacking. Following the person-job-fit theory, the most plausible explanation for such a result is an impact of the perception, that accounting is an above-average difficult, and demanding business major and as such requires above-average capacity and readiness to study, which deters students with less of such capacity and readiness from choosing it as their college major.

The same can be concluded for the relationship of accounting major choice with students' self-assessed diligence and affinity to study. Here too relationship is positive, indicating again that accounting attracts students who are above-average diligent and ready to study hard, and repels students who are struggling or slacking. This additionally supports the conclusion, that the perception of accounting as an above-average difficult business major is one of the most important

[7] It is also possible, that extraversion as measured in this study is not the best nor only individual difference variable differentiating between individuals repelled from/attracted to solitary work (environments). If this is true, then the inclusion of alternative variables or different measures might yield different results and conclusions. Also, it is possible, that the impact of the perception of accounting as a solitary work (environment) on accounting major choice is suppressed by the effects of some other, more important factors. For example, those who lack math or some other competencies but perceive them as required to be successful in accounting are not likely to choose accounting for their college major even if they are attracted by the perception of accounting as a solitary work (environment). Similarly, those strongly attracted by the perception of accounting as involving lots of math and working with numbers could choose accounting as their college major even if they are repelled by the perception of it as predominantly solitary work (environment).

The same might apply also for the other two individual difference variables in the study for which no statistically significant relationships with the accounting major choice were found (namely value orientation towards thrill and excitement and value orientation towards creativity and originality).

personal factors in a student's decision-making process whether to choose accounting as his/her college major or not.

Math competency and affinity to working with numbers are personal characteristics with the second strongest relationship to accounting major choice in our study. Here too, students with more math competency and affinity to working with numbers were more likely to choose accounting for their college major than students with less of such capacity and affinity. This is not surprising since good math competencies are often associated with one's overall capacity and diligence as a student. The existence of some overlap between the impact of these two variables on accounting major choice is evident also from the results of multiple regression analysis reported in Table 5 where math competency and affinity for working with numbers on accounting major choice lost the statistical significance it had when it was observed individually.

Again, following person-job-fit theory, the most plausible explanation for accounting majors possessing above-average math competencies and affinity for working with numbers compared to non-accounting business majors is an impact of the perception that accounting involves a lot of calculations and working with numbers and consequently requires above average math/numbers competencies/affinity, which in turn deters students with less of such capacity and affinity from choosing it as a college major.

Another personal characteristic observed as a factor of accounting major choice was students' attitude toward desk work and office work environments. As expected results show a positive relationship between a student's positive attitude towards desk work and office work environment and his/her decision to major in accounting, which once again can most plausibly be explained by the impact of the perception that accounting involves a lot of desk and office work generally.

The last personal characteristic observed as a factor of accounting major choice was the student's value orientation toward money and wealth. Here results show a negative relationship, indicating that those with a stronger value orientation towards money and wealth are less likely to choose accounting for their college major than those with less of such value orientation. Following person-job fit theory, the most plausible explanation for such a result is an impact of the perception of an accounting career offering (compared to other business majors) below-average opportunities for high earnings and wealth, which acts as a deterrent for those with strong value orientation towards money and wealth.

In summary, based on observed relationships of selected personal characteristics with the accounting major choice variable, and following the person-job fit theory proposition that individuals choose their jobs/careers based on perceived fit with their interests, skills, competencies, likes and dislikes, etc., it can be concluded, that perceptions of accounting as involving lots of routine, monotonous and repetitive work/tasks, and perceptions of accounting as solitary work (environment), did not have an important role in the decision-making process of observed students when considering whether or not to choose accounting as their college major.

On the other hand, based on the same approach and reasoning, perceptions of accounting as: (1) involving lots of math, calculations, and working with numbers, (2) involving lots of desk and office work, (3) being uncommercial, not likely to result in financial success, and (4) being difficult college major, are all found to have an important impact on observed students' decision whether to choose accounting as their college major or not, confirming that traditional perceptions about accounting and accountants do indeed have a substantial impact on accounting major choice. According to Nagelkerke R Square statistics, (1) personal characteristics of math competency and affinity for working with numbers, (2) attitude towards desk work and office work in general, (3) self-assessed diligence, (4) the number of successfully passed first semester exams and (5) value orientation towards money and wealth, collectively account for 47,1 % of the change in the accounting major choice as criterion variable in this study, which is a substantial result, considering that no other factors, frequently recognized as also important for student's choice of a college major, were included (e.g. influence of parents, friends, and relatives, influence of teachers, experiences with high school and college introductory accounting course, etc.).

Unfortunately, the findings of this study can not be generalized, since only one group of students from the same school having the same lecturer was participating. However, this was not the aim of the study in the first place. Rather, the aim was to demonstrate the possibility of an alternative approach to assessing the impact of perceptions about accounting and accountants on the decision of students whether or not to major in accounting. An approach, focused on observing the

relationships between accounting major choice variable and personal characteristics of students, and using these relationships in conjunction with person-job-fit theory as a basis for judgments about the impact of selected perceptions. For reasons explained in the introduction section of this paper, we believe that this is a better approach than the direct observation of differences in perceptions between accounting and non-accounting business students.

There are also some important limitations of the study that have to be noted. First, it is already mentioned that all participating students were from the same group, the same study program, and the same school, also having the same introductory accounting lecturer. Consequently, the findings of the study can not be generalized. The second limitation is the use of very brief measures for the majority of observed personal characteristics. Although all relevant reliability statistics were satisfactory, different and more precise measures might yield different results. Finally, in this study only a small number of selected perceptions and corresponding (matching) personal characteristics were observed. For a more complete assessment of the impact of popular accounting perceptions on accounting major choice, additional perceptions and corresponding (matching) personal characteristics should be tested, including interactions that might exist between some of them.

References

Albrecht, W. S., & R. J. Sack. 2000. *Accounting education: Charting the course through a perilous future*. Accounting Education Series no. 16. Sarasota, FL: American Accounting Association.

Ashton, M. C., & Lee, K. (2009). The HEXACO-60: A short measure of the major dimensions of personality. *European Journal of Psychological Assessment*, *91*(4), 340–345.
DOI: 10.1080/00223890902935878

Baxter, P. and Kavanagh, M. (2012). Stereotypes, students' perceptions and inherent creativity: further Australian evidence. *Australasian Accounting, Business and Finance Journal*, *6*(5), 81–100. DOI: 10.14453/aabfj.v6i5.6

Bougen, P. D. (1994). Joking apart: The serious side to the accountant stereotype. *Accounting, Organizations and Society*, *19*(3), 319–335. DOI: 10.1016/0361-3682(94)90039-6

Byrne, M., & Willis, P. (2005). Irish secondary students' perceptions of the work of an accountant and the accounting profession. *Accounting Education: an international journal*, *14*(4), 367–381.
DOI: 10.1080/06939280500346003

Caglio, A., Cameran, M., & Klobas, J. (2019). What is an accountant? An investigation of images. *European Accounting Review*, *28*(5), 849–871. DOI: 10.1080/09638180.2018.1550000

Carnegie, G. D., & Napier, C. J. (2010). Traditional accountants and business professionals: Portraying the accounting profession after Enron. *Accounting, organizations and society*, *35*(3), 360–376.
DOI: 10.1016/j.aos.2009.09.002

Chen, C. C., Jones, K. T., Scarlata, A. N., & Stone, D. N. (2012). Does the Holland model of occupational choice (HMOC) perpetuate the Beancounter-Bookkeeper (BB) stereotype of accountants?. *Critical Perspectives on Accounting*, *23*(4-5), 370–389. DOI: 10.1016/j.cpa.2011.10.006

da Costa, A. P. P., Weffort, E., de Sales Cia, J. N., & Cia, J. C. (2020). Accountant and accounting beyond jokes: an analysis of cartoons (1925-2003). *Journal of Business Administration Research*, *3*(1).
DOI: 10.30564/jbar.v3i1.1725

DeCoster, D. T., & Rhode, J. G. (1971). The accountant's stereotype: Real or imagined, deserved or unwarranted. *The Accounting Review*, *46*(4), 651–664.

Edwards, J. R. (1991). *Person-job fit: A conceptual integration, literature review, and methodological critique*. John Wiley & Sons.

Enget, K., Garcia, J. L., & Webinger, M. (2020). Majoring in accounting: Effects of gender, difficulty, career opportunities, and the impostor phenomenon on student choice. *Journal of Accounting Education*, *53*, 100693, 1 – 10. DOI: 10.1016/j.jaccedu.2020.100693

Friedman, A. L., & Lyne, S. R. (2001). The beancounter stereotype: towards a general model of stereotype generation. *Critical perspectives on accounting*, *12*(4), 423–451.
DOI: 10.1006/cpac.2000.0451

Holland, J. L. (1966). *The psychology of vocational choice: A theory of personality type and model environments*. Waltham, MA: Blaisdell.

Hunt, S. C., Falgiani, A. A., & Intrieri, R. C. (2004). The nature and origins of students' perceptions of accountants. *Journal of Education for Business*, *79*(3), 142–148. DOI: 10.3200/JOEB.79.3.142-148

Jeacle, I. (2008). Beyond the boring grey: The construction of the colourful accountant. *Critical Perspectives on Accounting*, *19*(8), 1296–1320. DOI: 10.1016/j.cpa.2007.02.008

Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individuals' fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Personnel Psychology*, *58*(2), 281–342. DOI: 10.1111/j.1744-6570.2005.00672.x

McGuigan, N., & Weil, S. (2011). Addressing a 'Preconceptual Threshold': A transformation in student preconceptions of introductory accounting. *ACCESS: Critical Perspectives on Communication, Cultural & Policy Studies*, *30*(2), 15–33. DOI: 10.3316/informit.026560226247945

Meixner, W. F., Bline, D., Lowe, D. R., & Nouri, H. (2009). An examination of business student perceptions: the effect of math and communication skill apprehension on choice of major. In *Advances in Accounting Behavioral Research* (pp. 185-200). Emerald Group Publishing Limited.

DOI: 10.1108/S1475-1488(2009)0000012010

Parker, L. D., & Warren, S. (2017). The presentation of the self and professional identity: countering the accountant's stereotype. *Accounting, Auditing & Accountability Journal*, *30*(8), 1895–1924.

DOI: 10.1108/AAAJ-09-2016-2720

Parker, L. D. (2000). Goodbye number cruncher!. *Australian CPA*, *70*(2), 50–52.

Richardson, P., Dellaportas, S., Perera, L., & Richardson, B. (2015). Towards a conceptual framework on the categorization of stereotypical perceptions in accounting. *Journal of accounting literature*, *35*(1), 28–46. DOI: 10.1016/j.acclit.2015.09.002 0737-4607

Reardon RC. (2001). The Self-Directed Search® Interpretive Report.

Saemann, G. P., & Crooker, K. J. (1999). Student perceptions of the profession and its effect on decisions to major in accounting. *Journal of accounting education*, *17*(1), 1–22. DOI: 10.1016/S0748-5751(99)00007-X

Schwartz, S. H. (2021). A Repository of Schwartz Value Scales with Instructions and an Introduction. *Online Readings in Psychology and Culture, 2*(2). DOI: 10.9707/2307-0919.1173

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.

DOI: 10.1080/09639284.2015.1072727

Appendix: Questionnaire[8]

Part A:

A1	Indicate your gender: ……..
A2	Please indicate your final high school/gymnasium mathematics grade: …….
A3	Please indicate your »Business mathematics« college course grade: …….
A4	Between both extremes round a number, that best describes your attitude towards mathematics: Don't like mathematics. ← -3 -2 -1 0 1 2 3 → Like mathematics.
A5	Round the number of <u>yet unfinished</u> exams from the first study semester: 0 1 2 3 4 5 6

Part B:

The table below contains short descriptions of an imaginary person. Please read them carefully and for each indicate (round appropriate number), how much you find this person similar to you personally. Use the following scale:

1 = not like me at all 2 = a little like me 3 = somewhat like me 4 = quite like me 5 = very much like me

B1	This person is creative and innovative.	1 2 3 4 5
B2	This person is communicative. Easily makes contacts and likes to work with other people.	1 2 3 4 5
B3	This person is good at mathematics and likes to work with numbers.	1 2 3 4 5

[8] Items from the 60-item version of Hexaco Big Six Personality Inventory, items from the ESS21 Value Scale, and items, not used in the study, are excluded.

Continuation of Part B:

1 = not like me at all 2 = a little like me 3 = somewhat like me 4 = quite like me 5 = very much like me

B4	This person is orderly and meticulous.	1 2 3 4 5
B6	This person has a hard time working behind a desk for long hours.	1 2 3 4 5
B7	This person does not like to speak in public.	1 2 3 4 5
B8	This person likes to study.	1 2 3 4 5
B9	This person is diligent.	1 2 3 4 5
B10	This person is more of an individualist. Does not like teamwork.	1 2 3 4 5
B11	This person likes office work.	1 2 3 4 5

Part C:

Below there are pairs of opposite characteristics of different jobs – a) and b). For each pair, please round the option that you prefer, once you start working. If you don't care, round option c).

C1	a) Creative work, need for original ideas.	b) Little need for creativity and ideas.	c) Don't care
C2	a) Lots of teamwork and meetings.	b) Little teamwork and meetings.	c) Don't care
C3	a) Lots of office work.	b) Little office work.	c) Don't care

Na osebnostnih značilnostih zasnovano ocenjevanje vpliva predstav o računovodstvu na odločitev študentov za študij računovodstva

Izvleček

V prispevku smo za vzorec dodiplomskih študentov prvega letnika visokošolskega strokovnega programa poslovnih ved ocenili vpliv izbranih uveljavljenih percepcij o računovodstvu na njihovo odločitev za izbiro računovodstva kot svoje študijske usmeritve. Namesto običajnega neposrednega opazovanja razlik v percepcijah med študenti računovodstva in študenti drugih študijskih usmeritev smo uporabili nov pristop, zasnovan na opazovanju razlik med osebnimi značilnostmi študentov računovodstva in študentov drugih študijskih usmeritev, prepoznanimi kot pomembne za posameznikovo osebno ujemanje z opazovanimi uveljavljenimi percepcijami o računovodstvu kot področju dela in študijski usmeritvi. Kot pokazatelj obstoja in jakosti vpliva opazovanih percepcij na odločanje študentov v zvezi z možnostjo nadaljevanja svojega študija na računovodski študijski usmeritvi smo uporabili regresijske koeficiente, pridobljene z regresijo opazovanih osebnih značilnosti na odločitev študentov za izbiro računovodstva kot svoje študijske usmeritve. Rezultati kažejo pomemben vpliv nekaterih izmed uveljavljenih percepcij o računovodstvu na odločanje študentov v zvezi z izbiro računovodstva kot svoje študijske usmeritve.

Ključne besede: računovodstvo, računovodska študijska usmeritev, predstave o računovodstvu, osebne značilnosti.