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Majoring in accounting: Effects of gender, difficulty, career opportunities, and the impostor phenomenon on student choice

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ABSTRACT

Staff level public accounting firm employees are roughly gender-balanced, leading one to believe accounting majors should be similarly balanced. However, some universities find their female-identifying student population to be smaller than expected. Students have many reasons for choosing a particular major, including personality fit, subject aptitude, and career opportunities. Likewise, students may avoid certain majors due to perceived difficulty and feelings of impostor phenomenon (IP), which can be described as a feeling of not being good enough or smart enough despite evidence to the contrary. This study seeks to discover how gender, perceived difficulty, impostor phenomenon, and perceived opportunity impact a student's decision to major in accounting. We find that those who rate career opportunities as high relative to other majors are more likely to choose accounting as a major. Additionally, students with high IP are more likely to major in accounting than other students. Interestingly, women with high IP who also perceive accounting to be a difficult major are even more likely to major in accounting than other students. This appears to be due to the common drive of high IP individuals to continue to strive to convince themselves and others that they are not the impostors they believe themselves to be.

1. Introduction

Society has long struggled with gender disparity, particularly at management levels, and the accounting profession is not different. The first woman was not promoted to partner at a public accounting firm until the 1960's, with less than 0.5% female partners in 1977 and approximately 1% in 1983 (Guerra & Huset, 2008). Women made up approximately 16% of accountants in 1960 (Guerra & Huset, 2008). Today, approximately half of all full-time staff at public accounting firms are women, though less than 30% of partners and principals are women (Wilson-Taylor Associates, 2019). Women make up approximately half of all accounting undergraduate students and just over half of all accounting graduate students (Association of International Certified Professional Accountants, 2019). However, not all universities meet this benchmark. Across individual states in the U.S., including the District of Columbia, the percentage of women graduating with Bachelor's degree in Accounting between 2012 and 2017 ranges from 42.6% to 66.3%, with 22 states having less than half of their accounting degrees awarded to women (DataUSA/VizBuilder, n.d.).

This study investigates the gender disparity in student enrollment in two school of business accounting programs, both of which have a lower than average number of female accounting students. One school is a Midwestern private university,

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where 34% of accounting majors are women, and the other is a Northeastern public university, where 45% of accounting majors are women, in an attempt to identify potential causes raised in faculty and advisory board meetings. There are many reasons college students give for their major choice including interest in the subject, career opportunities/job availability, and perceived aptitude for the major (Blay & Fennema, 2017; Kim, Markham, & Cangelosi, 2002; Malgwi & Howe, 2005). Likewise, students may avoid certain majors for various reasons. For example, whether individuals have a "fixed" or "growth" mindset (Dweck, 2008) may help explain why some individuals choose not to major in accounting when tasks are perceived to be difficult and they doubt their abilities (Mueller & Dweck, 1998). Additionally, female students may adopt the "superwoman attitude," where they feel pressured to excel in all they do (Cusack, Hughes, & Nuhu, 2013)), which may cause them to experience the impostor phenomenon (IP). IP can be described as a feeling of not being good enough or smart enough despite evidence to the contrary (Clance & Imes, 1978; Kolligian & Sternberg, 1991). Our study seeks to discover how gender, perceived difficulty, impostor phenomenon, and perceived opportunity impact a student's decision to major in accounting.

We conducted an online survey at the aforementioned universities that resulted in 232 usable responses from undergraduate school of business students. Participants answered a series of questions that gathered insights into their personality, their experiences regarding IP, perceptions regarding career opportunities, as well as the difficulty of different business majors.

As expected, we find participants perceive there are more opportunities for accounting majors relative to other business majors, which makes them more likely to major in accounting. In addition, accounting is perceived to be more difficult than other majors, but this difficulty generally does not turn them away from majoring in accounting. Using Holmes, Kertay, Adamson, Holland, and Clance (1993) cutoff score of 62 on the Clance Impostor Phenomenon Scale (Clance, 1985) to determine which participants experience IP, we find that more female participants (14.2%) in our sample experience IP than male participants (6.3%), which is consistent with prior literature that finds a gender difference in experiences of IP (Cusack et al., 2013; Ghorbanshirodi, 2012; King & Cooley, 1995). However, we were surprised to find our male participants had a higher mean IP score (59.3) than our female participants (51.9).

When we look at the combination of IP and perceived difficulty, women who perceive accounting to be difficult and also experience IP are more likely to major in accounting, whereas other participants who perceive accounting to be difficult are less likely to major in accounting regardless of IP. One might think individuals with IP are less likely to choose difficult majors where they may fail, but our findings support the idea that while individuals with IP perceive themselves to be impostors, they are actually high achievers who may take more difficult paths in an attempt to prove their worth to themselves and others (Clance & Imes, 1978).

Overall, our findings suggest women who experience IP and think accounting is difficult are not the reason for the gender disparity in certain schools of business. Further, these women may represent some of our most successful students. As a result, we believe the key to increasing the number of women majoring in accounting is to focus on the career opportunities and mitigate concerns about the difficulty of the accounting major. Awareness of career opportunities may be facilitated through increased presence and visibility of female university professors and professionals (Egalite, Kisida, & Winters, 2015; Rask & Bailey, 2002). Without reducing the rigor of high-quality accounting programs, perceived difficulty can be mitigated by working with students to help them develop more growth-oriented mindsets (Dweck, 2008).

2. Background and hypothesis development

2.1. Major determinants

College students choose a major based on many interrelated factors. For example, Malgwi & Howe, 2005 found that, for both men and women, interest in the subject was the number one reason for choosing a particular business major. However, the number two reason for men was career advancement, compensation, and opportunities whereas women were more likely to choose a major based on perceived aptitude. Kim et al. (2002) found that accounting students choose that major largely due to interest in the work (33.3%), career opportunities (18.8%), and their abilities (16.5%). More recently, Blay and Fennema (2017) surveyed over 1,100 students, and found that accounting students choose their major primarily based on job availability (54%) and self-perceived aptitude (38%).[1] In Australia, students are more likely to choose accounting for its intrinsic characteristics, such as intellectual challenges, creativity, independence, and career options; and for job market conditions like job availability, security, and starting salary (Sugahara, Boland, & Cilloni, 2008).

2.2. Career opportunities

Accounting is an appealing major for many reasons. It is perceived to lead to a stable career field with many options, ranging from public accounting to consulting to working for private companies as accounting managers, controllers, chief financial officers, internal auditors, or financial analysts. Professional growth and financial security are readily attainable in these

[1] The paper does not state when this data was initially collected, however, based on the author appreciation section, data was likely collected at or just after the height of the Great Recession of 2008, which may account for the larger percentage of students choosing accounting for its perceived job security.

fields, but they generally require at least an undergraduate degree. The most successful professionals likely have a master's degree and a certification such as the Certified Public Accountant (CPA), Certified Internal Auditor (CIA), or Certified Management Accountant (CMA).

The accounting profession as a whole is largely gender-balanced, with 50% of full-time staff at public accounting firms being women (Wilson-Taylor Associates (2019), 2019), though the breakdown varies based on level and firm size (Institute, 2019). Beyond public accounting firms, women make up 60.6% of all accountants and auditors according to the 2018 Bureau of Labor Statistics (Bureau of Labor Statistics, 2019). This balance suggests that roughly equal numbers of men and women are studying accounting. However, not all universities are finding that to be the case. This study looks at two universities, one Midwestern private university (34% of accounting majors are women) and one Northeastern public university (45% of accounting majors are women) in an attempt to explain the implications of gender for accounting major selection.

2.3. Aptitude

Taking advantage of the career opportunities in the accounting field requires not just an affinity for accounting, but also an aptitude for the subject matter and other skills required to succeed. We conceptualize "aptitude" as a student's ability to achieve mastery (whether through natural ability or hard work) of accounting-related content designed to prepare students for their careers. Accounting is a subject that is often perceived to be difficult and academically rigorous, and even bright students may not perceive themselves to be capable of mastering it. Self-efficacy is a multi-dimensional construct that measures an individual's perceived ability to "successfully execute a course of action necessary to reach desired outcomes" (Bandura, 1977, 195). For an accounting student, academic self-efficacy would include a student's perceived ability to successfully complete challenging tasks such as homework, exams, and course projects in classes required for the major (Elias, 2008). Elias finds that academic self-efficacy among business students increases on average with each year of academic completion, ranging from 4.65 as freshmen to 5.35 as seniors on a 7-point Likert scale. Further, accounting students' academic self-efficacy is moderately high, with an average of 5.14 (SD = 0.43, $p < 0.05$) but ranks in the middle of the pack with regard to other business majors.

While individuals can have a predisposition toward certain subjects (e.g., math, science, fine arts, athletics), their perceptions of their own ability may be influenced by gendered stereotypes and external feedback. For example, women tend to doubt their ability in stereotypically male domains like math, regardless of whether someone mentions a stereotype or not. According to Tellhed and Adolfsson (2018), men, on the other hand, tend to doubt their ability moderately more when a stereotype is explicitly stated (e.g., women perform better in school than men). Dweck (2008) argues that differences in perceived ability are also due to whether an individual has developed a "fixed" or "growth" mindset. Mueller and Dweck (1998) find that praising children for their intelligence rather than their effort is more likely to result in the adoption of "performance goals" rather than "learning goals." Performance goals –a focus on achieving an end result– may lead children to give up more easily when tasks become difficult, and ultimately to view themselves as having a lower ability level. They argue that a fixed mindset may explain why earlier studies find "[b]right young girls who are academic stars in grade school often seem most vulnerable to later academic challenges" (Mueller & Dweck, 1998, 50) as efforts to increase confidence through praising intelligence may inadvertently cause students to doubt their abilities and give up faster on tasks that are perceived to be difficult.

2.4. Impostor phenomenon

While aptitude for a particular subject can be (at least somewhat) assessed through objective measures like grades and test scores, some individuals have difficulty judging their own ability. Terms such as "impostor phenomenon," "impostor syndrome," and "perceived fraudulence" have been used by clinicians, researchers, and the media to describe the feeling of being "not good enough," or the fear of being discovered to be incapable. These feelings persist despite objective evidence to the contrary, including grades, accolades, promotions, or other accomplishments. Kolligian and Sternberg (1991) describe perceived fraudulence as "a subjective experience of perceived intellectual phoniness that is held by certain high-achieving adults who, despite their objective successes, fail to internalize these successes" (p. 309). They developed the Perceived Fraudulence Scale (PFS), which they validated by administering it to 50 undergraduate students along with several other scales intended to measure a subject's perceptions of achievement pressure, depression, self-esteem, self-monitoring, social anxiety, and daydreaming styles. The subjects also completed a thought listing exercise and underwent a semi-structured interview with one of the authors. The authors conclude that

> fraudulent ideation results from a blend of inauthentic and self-deprecatory forms of thinking, with concomitant experiences of attention to one's behaviors and apprehension in evaluative situations. Perceived fraudulence may be looked at as a manifestation of the more general tendencies toward negative outlook or world view which, when combined with the vigilant monitoring of one's feelings and behaviors, yields the specialized feelings of fraudulence (p. 323–4).

The term "impostor phenomenon" (IP) was first introduced by Clance and Imes in their paper, "The Imposter Phenomenon in High Achieving Women: Dynamics and Therapeutic Intervention" (1978). After working with more than 150 successful women over several years, they describe an internal sense of phoniness, where "despite outstanding academic

and professional accomplishments, women who experience the imposter phenomenon persist in believing that they are really not bright and have fooled anyone who thinks otherwise" (p. 241). The authors attribute the development of these feelings to childhood experiences. Some subjects were constantly compared to a sibling who was described as "the bright one." Despite persistently striving to live up to the sibling, these women were never able to overcome the familial perception of being not as good, even while they were actually amassing significant accomplishments. Other subjects were deemed to be "the bright one," which was often paired with the expectation that, because they were so bright, everything should come easily to them. When these women encountered something they did struggle with, they began to doubt their abilities more broadly.

Clance went on to develop the Clance Impostor Phenomenon Scale (CIPS) (1985), which has become the most widely used IP scale among researchers. Studies have attempted to validate CIPS as well as other scales, including Kolligian and Sternberg's Perceived Fraudulence Scale (PFS) (1991) and Harvey (HIPS) (1981). While no scale rises to the level of a "gold standard" (Mak, Kleitman, & Abbott, 2019), both HIPS and CIPS are validated against clinical judgment, though CIPS is found to be more sensitive at identifying individuals with IP (Holmes et al., 1993). Holmes et al. also find that a cutoff score of 62 is more effective than the widely used median split to avoid both false negatives and false positives. PFS and CIPS are found to be internally reliable, internally consistent, and correlated with each other and other measures (Chrisman, Pieper, Clance, Holland, & Glickauf-Hughes, 1995). However, the CIPS is significantly shorter (20 items vs. 51 items), and therefore deemed to be more useful in both clinical and research settings. In our study, we use CIPS with a cutoff value of 62 to identify subjects experiencing IP.

Clance and Imes' initial work around IP was focused on women, as their clinical experience suggested that IP was much more likely to occur in women than in men (Clance & Imes, 1978). Subsequent research has been mixed as to the role of gender in IP. Some studies find that women experience IP more than men (Cusack et al., 2013; Ghorbanshirodi, 2012; King & Cooley, 1995), while others find no difference between genders (Cowman & Ferrari, 2002; Thompson, Davis, & Davidson, 1998). Cokley et al. (2015) find no mean differences in IP between men and women, but do find that IP plays a stronger role in academic performance for women. Women with IP tend to work harder to compensate for their perceived academic shortcomings.

Cusack et al. (2013) surmise that stereotypical gender norms lead women to take on more roles than men, and that women may internalize pressure to excel at all of them. They suggest that this "superwoman attitude" may trigger IP beliefs. Cokley et al. (2015) find that gender stigma consciousness, or the awareness of stigma associated with one's gender, is a positive predictor of IP, and the relation is stronger among women. Clance and Imes (1978) explain that men tend to attribute their success to personal characteristics and abilities, while women tend to attribute their success to effort or luck.

2.5. Hypotheses

Given the wide range of opportunities in the accounting field and the importance of career opportunities for major selection, our first set of hypotheses consider participants' expectations regarding career opportunities for accounting majors.

H1a. *Accounting has more perceived career opportunities than other business majors.*

H1b. *A student who perceives accounting to have more career opportunities is more likely to major in accounting than a student who does not.*

Because aptitude, or perceived ability, has also been shown to influence major selection, our second set of hypotheses consider participants' beliefs about the difficulty of the accounting major.

H2a. *Accounting is perceived to be more difficult than other business majors.*

H2b. *A student who perceives accounting to be difficult is less likely to major in accounting than a student who does not.*

Our next set of hypotheses consider the roles of gender and the impostor phenomenon (IP) in participants' choice of major. Though prior research has provided mixed evidence on gender differences in the incidence of IP, we expect that female participants will be more likely to experience impostor feelings.

H3a. *Female students are more likely than male students to experience the impostor phenomenon.*

We then examine whether there is a gender-based difference in perceptions about the difficulty of the accounting major among men and women in our sample.

H3b. *Female students are more likely than male students to perceive the accounting major to be difficult.*

We further hypothesize that experiences of IP moderates the relationship between perceived difficulty and choice of major, with female students being more likely to demonstrate the impostor phenomenon and also more likely to avoid more difficult majors than male students.

H3c. *Female students that experience Impostor Phenomenon and perceive accounting to be a difficult major are less likely to major in accounting than other students.*

3. Methodology

3.1. Survey[2]

This study used an online survey administered through Qualtrics, which included questions designed to assess characteristics of each participant's personality, their experiences of impostor phenomenon, their perceptions about different majors, and demographic information. We assessed personality characteristics using the Mini-IPIP Scale (Donnellan, Oswald, Baird, & Lucas, 2006), which is a shorter version of the International Personality Item Pool. The 20-item Mini-IPIP includes such statements as "I am the life of the party," "I sympathize with others' feelings," and "I have a vivid imagination." Participants responded to each statement on a 5-point Likert scale from "strongly disagree" to "strongly agree." The scale measures participants on the Big Five factors of personality: Extraversion, agreeableness, conscientiousness, neuroticism, and intellect/imagination.

We measured participants' experiences of impostor phenomenon using the Clance Impostor Phenomenon Scale (CIPS) (Clance, 1985). This scale has been validated and is widely used within the impostor phenomenon literature. This 20-item scale includes such statements as "At times, I feel my success has been due to some kind of luck" and "I can give the impression that I'm more competent than I really am." Participants responded to each statement on a 5-point Likert scale from "not at all true" to "very true." Participants' numerical responses were summed to give a score between 20 and 100. A score of 62 is used as the cutoff for participants deemed to have impostor feelings frequently (Holmes et al., 1993).

To assess perceptions about different majors, we asked participants to rank the business majors at their university on difficulty, future career opportunities, gender balance among students, and gender balance among professionals working in related career fields. Demographic information, including class year, gender, age, work experience, and primary major was also collected.

3.2. Participants

Participants in this study included undergraduate students from two universities in the United States. One is a small, private, liberal arts university in the Midwest, and the other is a large, public, research university in the Northeast. Participation was solicited via email from the authors directly to students. Emails were sent to 2,692 students at the two universities, and 356 students began the online survey, with 232 providing sufficient information to be included in our analysis, for a response rate of 8.6%.

4. Results

4.1. Descriptive statistics

Table 1 provides descriptive statistics for the sample. Of the students who completed the survey and are included in our analysis, 58% are women. Thirty-eight percent are accounting majors (declared or planning to declare), and 11% are deemed to experience significant symptoms of impostor phenomenon. Participants were asked to rank the business majors at their school according to career opportunities and difficulty. At the smaller university, the available majors are accountancy, economics, finance, international business, management and human resources, marketing, and supply chain management. At the larger university, the available majors are accounting, digital forensics, entrepreneurship, finance/financial analyst honors, information systems and business analytics, management, and marketing. Fifty-two percent of participants ranked accounting as having the most career opportunities of all the business majors, while 74% of participants ranked accounting in the top three most difficult majors.

Table 2 provides the correlation matrix for variables used in the analysis. Accounting difficulty (*AcctDiff*) and accounting opportunity (*AcctOpp*) are positively and significantly correlated. These variables are dummy variables coded as one for accounting opportunity (accounting difficulty) receiving the highest ranking (a ranking in the top three) compared to other business majors. The difference in coding (i.e., the top one versus the top three) was used to create some variability between the two variables. The matrix does not include variables that are correlated by construction (e.g., the interaction of women and impostor syndrome), nor are these variables included in the same model specification.

[2] All procedures and materials were approved by the Institutional Review Boards at both universities where the study was conducted.

Table 1
Descriptive statistics.[1]

Name	Min	Max	Median	Std. Dev.	Mean
Agreeableness	4	17	8	2.78	7.86
Conscientiousness	4	17	8	3.04	8.45
Extroversion	4	20	11	4.01	11.17
Intellect/Imagine	4	16	10	2.25	10.29
Neuroticism	4	20	12	3.34	12.52
AcctOpp	0	1	1	0.50	0.52
AcctDiff	0	1	1	0.44	0.74
Impostor	0	1	0	0.31	0.11
Women	0	1	1	0.49	0.58
Women/Opp	0	1	0	0.47	0.34
Women/Diff	0	1	0	0.50	0.45
Women/Imp	0	1	0	0.28	0.08
Women/Imp/Diff	0	1	0	0.24	0.06

[1] See Appendix A for a list of variable definitions.

Table 2
Correlation Matrix.[2,3]

	Women	Extroversion	Agreeableness	Conscientiousness	Neuroticism	Intellect/ Imagine	Impostor	AcctOpp	AcctDiff
Women	1	0.001	0.067	0.019	−0.276***	0.221***	0.127*	0.147*	0.076
Extroversion	0.001	1	0.229***	0.100	(0.080)	0.211**	0.135*	0.045	(0.162)*
Agreeableness	0.067	0.229***	1	(0.021)	0.005	0.263***	(0.027)	0.044	(0.031)
Conscientiousness	0.019	0.100	(0.021)	1	(0.078)	(0.022)	0.045	0.008	(0.032)
Neuroticism	(0.276)***	(0.080)	0.005	(0.078)	1	0.112	(0.222)***	0.037	0.004
Intellect/Imagine	0.221***	0.211**	0.263***	(0.022)	0.112	1	0.036	0.130	0.053
Impostor	0.127*	0.135*	(0.027)	0.045	(0.222)***	0.036	1	0.056	(0.048)
AcctOpp	0.147*	0.045	0.044	0.008	0.037	0.130*	0.056	1	0.319***
AcctDiff	0.076	(0.162)*	(0.031)	(0.032)	0.004	0.053	(0.048)	0.319***	1
Women/Op		0.052	0.047	0.033	(0.134)*	0.109*	0.105		0.214**
Women/Imp/Diff		0.035	(0.052)	0.004	(0.182)**	0.032	0.729	0.099*	
Women/Diff		(0.020)	(0.007)	(0.010)	(0.196)**	0.130*	0.080	0.252***	
Women/Imp		0.129*	0.015	0.049	(0.208)**	0.109*		0.067	(0.002)

[2] Significance is denoted < 0.1 as *, <0.01 as **, and < 0.001 as ***.
[3] See Appendix A for a list of variable definitions.

4.2. Empirical analysis

4.2.1. Career opportunities

Our first set of hypotheses consider participants' beliefs about career opportunities for accounting majors compared to other majors. For H1a, we use a paired *t*-test to compare the mean ranking of accounting opportunities to other business majors (See Table 3, Panel A). We find significantly higher opportunity rankings for accounting compared to each of the other majors common to both universities (finance $t = 5.21$, $p < 0.001$; management $t = 19.78$, $p < 0.001$; marketing $t = 19.59$, $p < 0.001$), which supports the hypothesis that participants believe there are more career opportunities for accounting majors. For H1b, we use the following logit model to test how participants' beliefs about career opportunities influence their choice of major.

$$log\frac{p(accountingmajor)}{1-p} = \beta_1 + \beta_{1-5}Personalityfactors + \beta_6 AcctOpp + \beta_7 AcctDiff + \beta_8 GenderxIPxAcctDiff + \varepsilon$$

The dependent variable is a dummy variable set to "1″ for participants that indicated accounting as their major. The independent variable of interest is *AcctOpp*, the ranking of accounting on career opportunities, as compared to other business majors. Since the two schools in the study offer different majors, we operationalize participants' rankings as a dummy variable set to "1" if accounting was ranked highest among all available majors for career opportunities. We find that subjects who rank accounting as the major with the most opportunities are more likely to major in accounting ($p < 0.001$) (see Table 4). This finding supports H1b and is significant across all model specifications.

4.2.2. Difficulty

Our second set of hypotheses examine participants' beliefs about the difficulty of the accounting major relative to other business majors. For H2a, we use a paired *t*-test to compare the mean ranking of accounting to other majors (see Table 3,

Table 3
T-tests.[4]

Panel A Accounting Opportunity vs other majors within subject or paired T-test two tailed test		
	T statistic	P-value
FinOpp	9.950	<0.001
MngtOpp	14.275	<0.001
MktOpp	10.770	<0.001
Panel B Accounting Difficulty vs other majors within subject or paired T-test two tailed test		
	T statistic	P-value
FinDiff	5.212	<0.001
MngtDiff	19.776	<0.001
MktDiff	19.595	<0.001
Panel C Women compared to Men between subject T-test		
	T statistic	P-value
Acct Diff	1.687	0.093
Impostor	2.050	0.041

[4] See Appendix A for a list of variable definitions.

Table 4
Logistic regressions.[5,6]

Model specification	(1)	(2)	(3)	(4)	(5)
Intercept	−0.08	0.85	0.14	0.89	0.04
Acct Opp	1.71***	1.67***	1.73***	1.69***	1.69***
Acct Diff	−0.81*	−0.59	−0.63	−0.55	−0.64
Impostor		1.39***			
Women/Opp			−0.09		
Women/Diff				−0.13	
Women/Imp					1.7**
Women/Imp/Diff	2.06**				
McFadden R-square	0.1466	0.142	0.1159	0.1162	0.1458

All models include 5 personality factors as control variables.
[5] Significance is denoted <0.1 as *, <0.01 as **, and <0.001 as ***.
[6] See Appendix A for a list of variable definitions.

Panel B). We find that subjects rank accounting significantly more difficult than the other majors common to both universities (finance $t = 9.95$, $p < 0.001$; management $t = 14.27$, $p < 0.001$; marketing $t = 10.77$, $p < 0.001$). This result provides evidence that supports H2a. Subjects perceive accounting to be a difficult major relative to other business majors. For H2b, we use our logit model to test how participants' beliefs about difficulty influence their choice of major.

The dependent variable is, again, a dummy variable set to "1″ for participants that indicated accounting as their major. The independent variable of interest is *AcctDiff*, the ranking of accounting on difficulty, as compared to other business majors. We operationalize the difficulty rankings using a dummy variable set to "1" if accounting was ranked in the top three majors for difficulty. Many subjects ranked accounting number one for both career opportunities and difficulty, creating issues of multicollinearity in subsequent analysis. To increase variation among our subjects we use "Top 1" for career opportunities and "Top 3" for difficulty. We find that difficulty is not significant for most of the model specifications (See Table 4).

4.2.3. Gender

Our third set of hypotheses consider the role of gender in major selection. For H3a and H3b, we use *t*-tests to compare the mean IP score and difficulty ranking, respectively, for female and male participants (see Table 3, Panel C). We find that female subjects are marginally more likely ($p = 0.093$) to perceive accounting to be difficult than their male counterparts, and they are more likely ($p = 0.041$) to experience impostor phenomenon than their male counterparts.

For H3c, we again use our logit regression model, where the dependent variable is a dummy variable set to "1″ for participants that indicated accounting as their major. The independent variable of interest is the interaction of gender, IP, and difficulty ranking. Model 1 of Table 4 provides our main result. We find that women who experience impostor phenomenon and perceive accounting to be difficult are more likely ($p < 0.01$) to major in accounting than other students (specifically, all male students and female students who do not experience IP and/or do not perceive accounting to be difficult). Model specifications 2 through 5 are used to explore other reasons why a female subject who experiences impostor phenomenon and perceives accounting to be difficult is more likely to major in accounting than other students. The second model finds that students experiencing impostor phenomenon are more likely ($p < 0.001$) to major in accounting, regardless of gender. The

third model finds no significant effect of opportunity on female subjects' decision to major in accounting compared to their male counterparts. The fourth model finds no significant effect of difficulty on female subjects' decision to major in accounting compared to their male counterparts. The fifth model finds women who experience impostor phenomenon are significantly more likely ($p < 0.01$) to major in accounting than other students. This positive effect could be what is being captured in the impostor phenomenon positive effect in Model 2.

5. Discussion and conclusion

We find strong support for H1a and H1b. Subjects believe there are more career opportunities for accounting majors relative to other business majors, and this belief draws students to accounting as a major. Support for H2a and H2b is mixed. While subjects believe accounting is more difficult than other majors, this difficulty does not seem to deter students from choosing accounting as a major. This result may be due to the fact that difficulty is perceived differently depending on the subject's gender and/or experience of impostor phenomenon. Difficulty may also make a major more attractive for some subjects and less attractive for others. There may be prestige associated with selecting a difficult major, or a belief that a more difficult major will be rewarded with a more lucrative career. On the other hand, fear of failure may prevent some students from choosing a difficult major. The model specification (Table 4, Model 1) that controls for women with high impostor phenomenon has a significant and negative coefficient for accounting difficulty ($p < 0.1$). We conclude that male students and female students who do not have high IP are less likely to choose accounting as a major if they perceive it to be a difficult major.

We find some support for H3a and H3b in the *t*-tests. Consistent with prior literature, which has typically found either no gender difference or that women are more likely to experience IP than men, we find that female subjects in our study are more likely than male subjects to experience impostor phenomenon. We also find that women are marginally more likely than men to perceive accounting to be a difficult major.

Perhaps the most surprising result in our study is H3c, which finds that women with IP who also believe accounting is difficult are actually more likely to choose accounting as a major than male students or female students who do not have IP and /or do not believe accounting is difficult. Popular discussions of the impostor phenomenon focus on the feelings of inadequacy and fear of being "discovered," which intuitively suggests that individuals suffering from IP might avoid high-difficulty situations where they fear or even expect to fail. However, a more nuanced understanding of IP reveals that impostors feel this sense of inadequacy *despite* substantial evidence to the contrary. Impostors tend to be highly successful individuals by external standards. They may also, as Clance and Imes (1978) report, feel pressure to continue striving for achievement in order to prove their worth to themselves and others. This constant drive to "do more" or "be better" may lead impostors to choose a more difficult path - in our setting, the accounting major. This outcome could also have implications for the accounting profession and could be another determinant impacting women's choices throughout their careers. If accounting firms' female staff are disproportionately experiencing the impostor phenomenon, this desire to succeed may drive some women to the partner track and exemplary careers. For other women, this constant internal pressure may lead to burnout and eventually leaving the firm for other opportunities (Leung, 2006; Villwock, Sobin, Koester, & Harris, 2016). Firm retention initiatives and future research should consider the impact of the impostor phenomenon and how it may differentially affect female employees and potentially explain part of the gender imbalance at the partner level of public accounting firms.

In addition, as seen in the results from H1, subjects believe there are more career opportunities for accounting majors. This belief is borne out by near 100% placement rates at many schools for accounting graduates. Students who feel inadequate may gravitate towards a major where they believe everyone will get a job. We leave it to future researchers to study these or other possible explanations of our results.

Our study contributes to the ongoing discussion of gender and academics. Our findings suggest that, generally, men and women choose (or avoid) difficult majors for similar reasons. If administrators desire to address gender imbalances among their students, they should consider targeting female students and emphasizing the career opportunities that are available to them. In addition, though our study does not directly address this, female students' perceptions about gender imbalances in the workplace may affect their choice of major. By exposing them to successful women in a particular field (as faculty, mentors, guest speakers, etc.), they may see more opportunities specifically for women, and may then be more willing to choose that major. Our study also contributes to the discussion of gender imbalances in the workplace by showing that women with impostor phenomenon may be drawn to difficult fields as they continue to try to prove their worth. A higher proportion of female impostors in a field may lead to gender imbalances if they eventually burnout and then leave the field.

Our findings may not generalize to the general university population, as it was limited to two universities, both of which experience less gender-balanced numbers of accounting majors. In addition, only 11% of our sample was classified as individuals who experience IP. A larger sample may lead to different results. Finally, in the interest of parsimony we did not collect sufficient data to address all potential reasons students choose to major in accounting. Future research should consider studying other determinants such as family considerations, diversity (or lack thereof) of faculty and accounting professionals, stereotype threat, and accounting/business school-specific self-efficacy.

Appendix A. List of variable definitions

Variable name	Definitions
Agreeableness	Agreeableness score from IPIP scale (five factor personality scale)
Conscientiousness	Conscientiousness score from IPIP scale (five factor personality scale)
Extraversion	Extraversion score from IPIP scale (five factor personality scale)
Intellect/Imagine	Intellect/Imagine score from IPIP scale (five factor personality scale)
Neuroticism	Neuroticism score from IPIP scale (five factor personality scale)
AcctOpp	Dummy variable coded 1 for subjects who rank accounting as having the most opportunities, 0 otherwise
AcctDiff	Dummy variable coded 1 for subjects who rank accounting as one of the top three most difficult majors out of 7(8) majors, 0 otherwise
Impostor	Dummy variable coded 1 for subjects who score 62 or higher on the impostor syndrome scale, 0 otherwise.
Women	Dummy variable coded 1 for subjects who identify as women, and 0 for subjects who identify as men.
Women/Opp	Dummy variable coded 1 for subjects who identify as women and rank accounting as having the most opportunities, 0 otherwise.
Women/Diff	Dummy variable coded 1 for subjects who identify as women and rank accounting as one of the top three most difficult majors out of 7(8) majors, 0 otherwise.
Women/Imp	Dummy variable coded 1 for subjects who identify as women and score 62 or higher on the impostor syndrome scale, 0 otherwise.
Women/Imp/Diff	Dummy variable coded 1 for subjects who identify as women, score 62 or higher on the impostor syndrome scale, and rank accounting as one of the three most difficult majors out of 7(8) majors, 0 otherwise.

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