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Are auditors more conservative?

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Abstract: We examine whether and why auditors are more conservative than non-auditors. Our study is based on a database of college graduates in one major Chinese university over the period 2004-2014. Our data allow us to track the career path of each student from the initial university enrollment in the accounting major all the way up to five years after joining the auditing profession. We measure conservatism using two proxies based on each student's selection of general education elective courses in the university. We find that more conservative students are more likely to choose accounting as their major. However, we find no evidence that the accounting major students who are more conservative are more likely to become auditors. In addition, we find that the auditors who are more conservative are more likely to remain in the auditing profession five years after graduation. Our study helps shed light on the labor market evolution of the auditing professionals.

Keywords: auditor, conservatism, China, university student

1. Introduction

Accounting conservatism is one important quality indicator of a firm's financial statements (Basu 1997; Watts 2003). The existing literature has largely focused on the role of a firm's institutional environment, such as contracting, litigation, regulation, and taxation, in shaping the firm's accounting conservatism (e.g., Basu 1997; Watts 2003; Ball et al. 2000, 2003; Ball and Shivakumar 2005; Ahemd et al. 2002; Qiang 2007; Nikolaev 2010; Hui et al. 2012). In particular, prior research shows that the institutional environment of the auditing profession (e.g., auditing regulation and enforcement) plays an important role in determining a firm's accounting conservatism (Francis and Wang 2008; Jenkins and Velury 2008; Li 2010; Goh and Li 2011; Gong et al. 2015). This line of research typically takes an individual auditor's personal characteristics as given and ignores the potential impact of an auditor's personal characteristics on the clients' audit quality. However, Amir et al. (2014) show that individual auditors' personal characteristics are associated with a firm's accounting conservatism. Despite the importance of auditors' personal characteristics to audit quality, and the fact that both auditing firms and individual college students have the freedom to choose one another, the existing auditing literature is typically silent on the equilibrium choices of individual auditors in the profession. The objective of this study is to attempt to fill this gap in the literature by examining the effect of an individual's degree of conservatism on his/her career choice in accounting over his/her entire career path, i.e., from the initial decision to major in accounting in college to the entry to the auditing profession, and ultimately his/her long-term survival in the auditing profession.

We examine three specific research questions. First, we study whether more conservative students are more likely to be **accounting students** (i.e. students majoring in accounting). Second, conditional on majoring in accounting, we investigate whether more conservative accounting students are more likely to enter the auditing profession as auditors. Third, conditional on entering the auditing profession, we explore whether more conservative auditors are more likely to remain in the auditing profession five years after college graduation. Since the existing literature (e.g. Watts 2003; Desai et al. 2006; Hennes et al. 2008; Francis et al. 2015) finds that accounting conservatism reflects an individual's attitude toward risk, we use the terms "risk aversion" and "conservatism" interchangeably in this paper.

Our study is based on a dataset that covers undergraduate students who enrolled in a major university in China (hereafter referred to as The University) between 2004 and 2014. The University has a large number of students majoring in accounting, finance and other business-related disciplines. A large proportion of accounting students work as auditors after earning a bachelor's degree. The dataset contains personal characteristics including gender, age, ethnicity, as well as the province they took their college entrance exams (**Gaokao**), and information on courses taken, major, specialization (i.e. area of study within a major),¹ and job placement after earning a bachelor's degree. For each course taken by a student, we know the student's score and grade, and an identifier of the teacher who taught the course. To examine the career paths of students who have become auditors, we combine the data with an annual list of Certified Public Accountants (CPAs) collected from the Chinese Institute of Certified Public Accountants (CICPA).

We measure conservatism using two proxies constructed based on the students' selection of general education elective (**GEE**) courses. General education (**GE**) courses are designed to expand the knowledge base outside the students' major. Besides GEE courses, the other type of GE courses are general education compulsory (**GEC**) courses. When students are choosing GEE courses to fulfill the required credits, their main trade-off is between broadening the scope of knowledge and achieving higher grades. Since the University did not require the teachers to grade on bell curve in our sample period, courses in which it is easier to achieve higher grades are likely to offer fewer things to learn and thus preferred by more risk averse students. Our first proxy for conservatism measures the likelihood of students choosing courses taught by teachers who have a history of being lenient in grading. Our second proxy measures the likelihood of students choosing courses that have a history of more students achieving high grades. The difference between the two proxies is that the former associates risk with teachers' "style" of grading and the latter with the difficulty of the courses content. Since we are not aware of other studies using similar proxies to measure conservatism, we validate the proxies by testing their relationship with gender and cognitive ability. The literature has found that females tend to be

¹ For example, accounting major consists of specializations including Accounting, Accounting for Chinese Institute of Certified Public Accountants, Accounting for Association of Chartered Certified Accountants, etc.

more conservative than males, and cognitive ability tends to be positively correlated with avoidance of harmful situations (in our case, the harmful situation is getting a lower grade).² The results of our validation tests are consistent with the literature.

With the proxies for conservatism, we first examine whether more conservative students are more likely to choose to major in accounting. Prior literature documents that individuals who are more risk averse are less willing to take risks in their career choices (Dohmen et al. 2011). Since accounting jobs are generally quite secure, and accountants are less likely to experience layoffs, pay cuts, or reductions in benefits (Tysiac 2012), risk averse students may be drawn to enter the accounting profession. Moreover, since accounting jobs have long been viewed as dull and unappealing (Dimnik and Felton, 2000), students who choose to major in accounting are likely to have higher tolerance for boredom. As the psychology literature documents that people with higher tolerance for boredom are more likely to be less risk taking (Zuckerman 1979), we hypothesize that more conservative students are more likely to choose accounting as their major. Our empirical finding, based on accounting students and students in all other majors, supports this hypothesis.

In another test, we restrict our sample to students majoring in either accounting or finance, and find that students who are more conservative are more likely to choose accounting over finance. We compare finance and accounting majors because both majors are pathways to business-related professional jobs. Also, since both majors generally require higher scores in Gaokao relative to other majors, students in these two majors are comparable in terms of academic performance.

Next, we restrict our sample to accounting majors, and investigate whether students who are more conservative are more likely to become auditors. On the one hand, audit firms might prefer more conservative students, since more conservative auditors might be more likely to identify clients' risk. However, it is questionable whether audit firms are able to select more conservative students in their hiring process. Identifying traits like conservatism is likely difficult because job seekers can manipulate their responses to misrepresent themselves as the kind of people audit firms are looking for. On the

² See Eckel and Grossman (2008) and Croson and Gneezy (2009) for detailed reviews about gender difference in conservatism and Dohmen et al. (2018) for a review about the relation between cognitive ability and conservatism.

other hand, from the students' perspective, more conservative students might prefer to be corporate accountants rather than auditors as corporate accounting is perceived to be a less risky career path whereas the turnover rate in audit firms is very high (PCAOB 2015). Hence, we cannot predict whether accounting majors who are more conservative are more likely to become auditors. Our empirical results show an insignificant relation between conservatism and the likelihood of being an auditor.

Finally, we focus on accounting majors who have become auditors. We hypothesize that more conservative auditors are more likely to stay in the auditing profession over the long run. Because of litigation costs and the incentive to retain good reputation, audit firms are likely to retain auditors who are more conservative to reduce engagement risk. Consistent with the hypothesis, we find that more conservative auditors are more likely to stay in the auditing profession five years after college graduation.

In the University, during our sample period, about half of the students who work as auditors upon college graduation are accounting majors. Hence, we are also interested in whether among non-accounting majors, more conservative individuals are more likely to become auditors. We look at non-accounting students from three other schools.³ They are all business-related and each of them constitutes around 10 percent of all the students who work as auditors upon college graduation. Again, we do not find evidence that more conservative students are more likely to become auditors. We also examine whether for non-accounting students who have become auditors, more conservative ones are more likely to stay in the auditing profession five years after graduation. We find weak support for this prediction.

Our study is related to the literature that attempts to explain accounting conservatism. While the existing studies largely focused on the role of a firm's institutional environment, following the executive style literature (e.g. Bertrand and Scholar 2003; Drying et al. 2010; Gul et al. 2013), recent studies find that companies' accounting conservatism increases when CFOs are female (Francis et al. 2015) and when audit committee directors are accounting expertise (Krishnan and Visvanathan 2008), and decreases with managers' overconfidence (Ahmed and Duellman 2013) and audit partners' risk

³ School in the University is in between department and faculty level in typical US universities. For example, the University has School of Accounting, School of Finance, and School of Maths.

tolerance (Amir et al. 2014). In particular, Amir et al. (2014) is the only paper that examines auditors' personal characteristics. They find that audit partners who are more risk taking, measured by having engaged in criminal convictions, are more likely to have clients with less conservative financial reporting compared with audit partners without criminal convictions. In contrast, we do not focus on partners. We track the career path of students and find that more conservative students are more likely to become accountants. Although accounting students who are more conservative are no more likely to become auditors, accounting-students-turned-auditors who are more conservative are more likely to remain in the profession five years after graduation. The evidence suggests that more conservative students are more likely to be auditors. Hence, accounting conservatism might exist independent of the institutional environment.

Our study is also related to the literature that examines the behavior of people with accounting experience. Besides Krishnan and Visvanathan (2008) who find that audit committee directors' accounting expertise is associated with accounting conservatism, existing studies find that accounting managers are more risk averse than other managers (Helliard et al. 2002), companies whose CFOs have accounting background are more risk averse in financial reporting and corporate finance decisions than other companies (Aier et al. 2005; Li et al. 2010; Rakhman 2009; Hoitash et al. 2016), and leading investment bankers' experience as auditors reduce earnings management in IPO firms (He et al. 2019). The subjects of these studies are already the results of the selection of the promotion process in their organizations. We are the first to examine the natural selection process of the accounting profession, from the decision to major in accounting in college up to five years after joining the auditing profession. Hence, while prior literature cannot answer the question of whether accountants' risk attitude is learned through training and working experience or acquired before training, we find that accounting majors are more likely to exhibit risk averse behavior relative to their peers while in college.

2. Hypothesis development

An individual's risk preference might affect their preference over accounting or non-accounting majors in the following two ways. First, more risk averse people are less willing to take risks when making their career choices (Dohmen et al. 2011). Accounting jobs are viewed to be less risky. The

unemployment rate for accountants and auditors is low (RobertHalf 2019).⁴ According to a survey by HR service company Randstad, finance and accounting employees are among the least likely professionals to be concerned about threats to their job security such as layoffs, pay cuts, or reductions in benefits (Tysiac 2012). The job security of CPAs is even higher because the license is a barrier for non-CPAs to work in the profession.

Second, more risk averse people are more likely to tolerate boring accounting tasks. Accounting jobs have long been viewed as dull and unappealing (Dimnik and Felton 2000). Research has shown that non-accounting majors evaluate choosing a boring accounting major significantly more negatively than the accounting majors (Cohen et al. 1993).⁵ In psychology, “boredom susceptibility” is the term to describe “intolerance of repetition or boring people, and restlessness in such conditions” (Zuckerman 1979, 1994), so we argue that non-accounting majors have higher level of boredom susceptibility. Since boredom susceptibility is a component of sensation seeking (Zuckerman 1979) which is correlated with risk taking, we hypothesize that more risk taking students are more likely to be non-accounting majors. From these two reasons, we develop the following hypothesis:

H1: More conservative students are more likely to choose accounting as their major.

Next, we focus on accounting students and discuss the relation between their risk preference and likelihood of being an auditor from the employers’ and the students’ perspectives.

On the one hand, audit firms might prefer more conservative auditors (Chen et al. 2007). Since the current audit approach is risk-based, auditors need to be conservative so that they can identify clients’ risk of material misstatements and collect sufficient evidences to address the risk. Also, if clients intentionally hide problems from auditors, conservative auditors are more likely to discover the problems. However, it is questionable whether audit firms can select the students who are more conservative in their hiring process. Although some audit firms, especially the Big 4 firms, have personality tests in their hiring process, these questions are hypothetical and job seekers can manipulate

⁴ US statistics shows that the unemployment rate for accountants and auditors was 1.5% in Q2 2019. It is notably lower than the national unemployment rate of 3.7% (Robert Half 2019).

⁵ Non-accounting majors in Cohen et al. (1993) are from business schools.

the answers to misrepresent themselves as the kind of people the audit firms look for.⁶ In the interview sessions, interviewers have some opportunities to assess the interviewees' personalities through their performance in group discussions or one-to-one interviews. However, as the interviewers need to assess many aspects of the interviewees' skills and personalities in a short time, it is unclear whether "conservatism" can be reliably assessed. Employers might know some students better if they do internships. However, the internship work is often the most basic part of audit work and thus might not be enough to reflect the students' conservatism level.

On the other hand, more conservative students might prefer to be corporate accountants rather than auditors as corporate accounting is perceived to be a less risky career path whereas the turnover rate in audit firms is very high (PCAOB 2015). Moreover, audit firms value CPA licenses much more than the corporates, especially the Big 4 firms that require CPA licenses to be promoted and retain in the firms in the long run. However, the passing rate of CPA exams in China is very low.⁷ Hence, more conservative students are less likely to take the risk to work as auditors. Therefore, we make the following hypothesis:

H2: Among accounting students, more conservative students are no more likely to become auditors.

Next, we focus on accounting students who have become auditors and discuss the relation between their conservatism and propensity to stay in the auditing profession. Conservative auditors might be more likely to stay in the auditing profession. Because of litigation costs and the incentive to retain good reputation, audit firms use different ways to reduce engagement risk (DeFond and Zhang 2014; DeFond et al. 2015). Retaining more conservative auditors could be one way because less conservative auditors are more willing to engage in riskier audits and have higher tolerance of weaker governance

⁶ In China, there are some popular websites and forums (e.g. YingJieSheng, Zhihu) where people actively discuss their experience in the hiring process of different employers and the information is rich about Big 4 audit firms.

⁷ Stating from 2009, the CPA exam consists of two stages. In the first stage, there are six courses and the passing rate of each course is around 20% (CICPA 2018). Examinees must pass the first stage before entering the second stage. The older format of the CPA exam which no more exists after 2010 consists only one stage with five courses and the passing rate of each course is around 15% (Gaodun n.d.).

and aggressive accounting treatment (Amir et al. 2014). In an experiment setting, auditor partners' risk taking is found to positively affects managers' risk taking when the managers make judgement regarding client acceptance with the partners (Cohen and Trompeter 1998). The literature also found that conservative signing auditors (auditors who signed audit reports, the majority are partners) are more likely to be promoted (Chen et al. 2017).

Alternatively, researchers propose counter arguments as well. For example, Knechel et al. (2017) argue that auditors provide better audit quality may be more likely to have better outside job opportunities, so they are more likely to leave public accounting. Chen et al. (2017) argue that audit firms may also have an incentive to promote more aggressive auditors in order to curry favor with the management of publicly listed firms who wish to meet and beat short-term performance targets. However, neither Knechel et al. (2017) or Chen et al. (2017) find evidence to support the counter arguments.⁸ Following these studies, we make the following hypothesis:

H3: Among the accounting students who become auditors, conservative auditors are more likely to stay in the auditing profession over the long run.

3. Sample and data source

3.1 Data source

Our sample includes all undergraduate students enrolled in the University from 2004 to 2014 (hereafter referred to as “**student database**”). The University has a large number of students majoring in accounting, finance and other business-related disciplines. The student database has the following data:

(1) Students' personal characteristics

The student database includes the students' gender, age, ethnicity, the time they enrolled in the University, Gaokao province, major, specialization, the school of their major, their second major, if any,

⁸ Although Knechel et al. (2017) find that auditors' likelihood of issuing non-standard audit opinion is positively associated with their departure, they find that clients' misstatement and discretionary accruals are positively associated with their departure. The authors argue that overall, auditors providing high audit quality are less likely to leave auditing profession, but they might be more likely to leave if they are too conservative.

and the respective school. **Gaokao province** is the province or municipality where the students took Gaokao. In general, it is the place where the students complete their high school studies.

(2) Course data

The student database has information about all the courses the students took during their undergraduate studies. For each course a student took, we have information about the course name, course code, an identifier of the teacher who taught the course, the student's score and grade, course type (such as major compulsory course, major elective course, GEE, GEC, etc), and whether the course is retaken (because the student failed before).

(3) Job placement

The student database has the information about when the students graduated with a bachelor's degree, whether they worked or pursued further study upon college graduation, and the name and location of the organizations in which they worked or studied upon graduation.

To examine the career paths of students who have become auditors, we merge the student database with another database about individual CPAs (hereafter referred to as the “**CPA database**”). The CPA database covers CPA's personal information on an annual base from 2010 to 2018. The data before 2015 were collected directly from CICPA. The data from 2015 onwards are collected from the CICPA's website. The CPA database has information about the CPAs' names, the firms they work each year after they obtained the licenses, their gender, highest degree and major, the schools they graduated from, whether the CPAs obtained their CPA licenses by passing the CPA exam or not,⁹ when they passed the CPA exam, when they became CPAs, and the document that certifies their licentiate. We identify the first year that the CPA's personal profile information was deleted from the CPA database as the year the CPA leaves the auditing profession. See Appendix A for the detailed description of how we merge the student database with the CPA database.

⁹ Due to a grandfather clause, a significant percentage of Chinese (typically older) auditors obtained their CPA license without passing the formal CPA exam. However, all of the students in our sample obtained their CPA license by passing the CPA exam.

3.2 The samples used to test each hypothesis

We use different samples for the validation tests of our proxies and each hypothesis. The sample for validation tests and H1 is Dataset I. It includes all undergraduate students who enrolled in The University from 2004 to 2014. The sample for H2 is Dataset II and includes only accounting students in the University during the period. The sample for H3 is Dataset III and includes only a subset of accounting students who work as auditors upon college graduation. We discuss why and how the subset is constructed in Section 5. See Table 1 for the sample selection process.

4. Construction of the proxies for conservatism

4.1 Institutional background

We use students' course selection behavior to proxy for their conservatism levels. When students are choosing courses to fulfill the required credits, their main trade-off is between broadening the scope of knowledge and achieving higher grades. Since the University did not require teachers to grade on bell curve in our sample period, courses in which it is easier to achieve higher grades (i.e. easier courses) are likely to offer fewer things to learn, and vice versa for difficult courses. More risk averse students are more likely to take easier course.

There are two reasons why we focus on GEE courses instead of major elective courses. First, in each semester, students in different specializations face the same pool of GEE courses and therefore, we can better compare the degree of conservatism for all students using the same yardstick. Second, apart from the trade-off between knowledge and grades, students' interest might in principle be a factor in their course selections. However, it plays a very limited role in the selection of GEE courses because GEE courses are categorized into different areas, as discussed below, and students are making choices within the same area.

GEE courses are designed to expand the knowledge base outside the students' major course. They are categorized based on the area of the courses (e.g. social science, natural science). The number of categories of GEE courses was 6 for students enrolled from 2004 to 2008, 5 for students enrolled from

2009 to 2013 and 7 for students enrolled in 2014. During our sample period, each student is required to take at least one course in each category of GEE courses.

The students select courses from the same pool if they choose to take GEE courses of the same category in the same semester. The semesters for the students to take a specific category of GEE courses have been scheduled in the training plan. The training plans are designed for each specialization and each cohort. However, the schedule to take each category of GEE courses are very similar for students in one cohort and their previous cohort in the same specialization, except for the first cohort facing changes in the number of GEE categories. The time to take GEE courses are scattered from 1st year, semester 2 to 4th year, semester 1. 80% of the students select courses according to the schedule per the training plan due to two reasons. First, if they deviate from the schedule, they would have the last priority in selecting courses. Second, the number of credits a student is allowed to earn in each semester is capped at only a few points above the total credits that the training plan suggests to earn. Hence, the students do not have much freedom to select more courses than what the training plan suggests. In different semesters, the courses of the same category of GEE courses might be different.

Since we are interested in comparing the conservatism level of accounting students to non-accounting students, one might have the concern whether accounting students always choose different categories of the GEE courses at the same time with a very limited number of non-accounting students. For example, if accounting students choose different categories of GEE courses with only finance students, and students in all other schools never choose the same category of courses in the same semester with them, it might be problematic to compare the choice made by accounting students with non-finance students. To alleviate the concern, we check the number of students of each specialization who take each category of GEE courses in each semester and confirm that in each semester, accounting students take GEE courses with many non-accounting students of many different specializations.

4.2 Construction approach

We use two proxies for conservatism, *ConservatismT* and *ConservatismC*. They are constructed based on students' behavior in choosing GEE courses.

ConservatismT measures the likelihood of students choosing courses taught by teachers who have a history of being lenient in grading. We can construct the proxy because students in the University know who would teach the courses when they select them, and we have an identifier for the teacher who taught the course for almost all (97%) of the GEE courses. *ConservatismC* measures the likelihood of students choosing courses that have a history of more students achieving high grades. The difference between the two proxies is that the former associates risk with the teachers' "style" of grading and the latter with the difficulty of the courses content. In order to achieve high grades, students evaluate the propensity to get A or A- (hereafter referred to as A). In general, whether it is easy to get an A from a specific course depends on two things: (1) the teacher's "style" of grading, and (2) whether the content of the course is easy. *ConservatismT* is based on the assumption that whether it is easy to get an A from a specific course totally depends on the teacher's "style" of grading. Therefore, students who want to have higher grades will choose teachers who they find more generous to give As to students. *ConservatismC* is based on the assumption that whether it is easy to get an A from a specific course totally depends on the content. Therefore, students who want to have higher grade will choose courses that previously more students get As from the course.

The two proxies as computed as:

$$Conservatism_i = \sum_c w_i^c Rank^c$$

where $Conservatism_i$ refers to student i 's conservatism proxies, $ConservatismT$ and $ConservatismC$, w_i^c is the credit of course c over total credits of the GEE courses that student i earned throughout the university studies except for the retaken courses, and $Rank^c$ is the standardized ranking of course c . $ConservatismT$ and $ConservatismC$ are different in the ranking approaches used to construct $Rank^c$ and how c is defined.

For ***ConservatismT***, $Rank^c$ is the standardized ranking based on the teachers' propensity to give students As in the last academic year.

Specifically, we construct $Rank^c$ using the following four steps. As course c is unique at academic year-semester-course code-teacher level, we denote each GE course c with course code x taught by

teacher j in semester s of academic year y as a 4-tuple (x, j, s, y) . First, for each GE course (x, j, s, y) , we compute $\pi(x, j, s, y)$ as the proportion of students who get A. Second, for each j and y , we compute the average proportion of students who get A as $\Pi(j, y)$ by taking the average of $\pi(x, j, s, y)$ over x and s . Third, restricting to GEE courses, for each s and y , we rank all the courses within the same category based on $\Pi(j, y-1)$. We require that for each category, there are at least two courses with non-missing data of $\Pi(j, y-1)$. The ordinal ranking for a GEE course (x, j, s, y) in the category cat is denoted as $RawRank(x, j, s, y, cat)$. Finally, we compute $Rank(x, j, s, y, cat)$ as the standardized $RawRank(x, j, s, y, cat)$ for course c as:

$$Rank^c = RawRank(x, j, s, y, cat) / NumberOfCourses(s, y, cat)$$

where $NumberOfCourses(s, y, cat)$ is the total number of GEE courses in category cat with non-missing ranking data in semester s and academic year y .¹⁰

Since some teachers who taught GEE courses in one academic year taught GEC courses last year, we use GE courses in our first and second steps rather than GEE courses to compute $\pi(j, y, s, c)$ and $\Pi(j, y)$. In our third step, we rank GEE courses based on information of the previous academic year, and there are 76% of all the GEE courses with an identifier of the teacher. If we rank the courses based on information of previous semester instead, since many teachers did not teach GE courses every semester, we are only able to find 54% of all the GEE courses with an identifier of the teacher. Also, for one student, the most available and relevant information about GEE courses is from a student of the same specialization but in the previous cohort who, in most of the cases, took the same category of GEE courses in the same semester of last academic year. Hence, it is more reasonable to rank GEE courses based on information of the previous academic year rather than the previous semester.

For **ConservatismC**, $Rank^c$ is the standardized ranking based on the proportion of students to get A in the last academic year for the same course code.

¹⁰ For example, if for a certain category in a certain semester, there are four courses ($NumberOfCourses=4$) with $RawRank$ equal to 1, 2, 3 and 4. We compute $Rank$ of each course as 0.25 ($=1/4$), 0.5 ($=2/4$), 0.75 ($=3/4$) and 1 ($=4/4$).

Specifically, we construct $Rank^c$ using the following four steps. As course c is unique at academic year-semester-course code level, we denote each GEE course c with course code x in semester s of academic year y as a 3-tuple (x,s,y) . First, for each in each GEE course (x,s,y) , we compute $\pi(x,s,y)$ as the proportion of students who get A. Second, for each x and y , we compute the average proportion of students who get A as $\Pi(x,y)$ by taking the average of $\pi(x,s,y)$ over s . Third, in each s and y , we rank all the courses within the same category based on $\Pi(x,y-I)$. We require that for each category, there are at least two courses with non-missing data of $\Pi(x,y-I)$. The ordinal ranking for a GEE course (x,s,y) in the category cat is denoted as $RawRank(x,s,y,cat)$. Finally, we compute $Rank(x,s,y,cat)$ as the standardized $NumberOfCoruses(s,y,cat)$ ranking for course c as:

$$Rank^c = RawRank(x,s,y,cat) / NumberOfCoruses(s,y,cat)$$

where $NumberOfCoruses(s,y,cat)$ is the total number of GEE courses in category cat with non-missing ranking data in semester s and academic year y .

Similar as for $ConservatismT$, in our third step, we rank GEE courses based on information of the previous academic year, and there are 72% of all the GEE courses with an identifier of the teacher. If we rank the courses based on information of previous semester instead, since many courses were not offered for two continuous semesters, we are only able to find 63% of all the GEE courses with an identifier of the teacher. Hence, we do not adopt the alternative method.

4.3 Validation tests

We validate the proxies $ConservatismT$ and $ConservatismC$ in two ways. First, since females are found to be more risk averse than males (see Eckel and Grossman (2008) and Croson and Gneezy (2009) for surveys), if $ConservatismT$ and $ConservatismC$ are valid, we expect to observe a gender difference for $ConservatismT$ and $ConservatismC$.

Second, the literature suggests that cognitive ability tends to be positively correlated with avoidance of harmful situations, but negatively correlated with risk aversion in advantageous situations. “Harmful” situations are situations where people make the decision whether to engage in purely harmful activities,

for example, substance use, smoking, alcohol consumption, unsafe sexual behavior, or criminal. In “advantageous situations”, people make the decision whether to take a risk with potential gains. For example, Grinblatt et al. (2011) find that stock market participation monotonically increases with intelligence scores using evidence from Finland. In experiment setting, researchers find that people with high cognitive ability are more likely to prefer lottery to safe payment (e.g. Dohmen et al 2010; Burks et al. 2009). See Dohmen et al (2018) for a review of studies on the relationship between cognitive ability and risk preference. As our proxies for conservatism capture whether the students would try to avoid a situation that is purely harmful, that is, failing to get As, we predict a positive relation between cognitive ability and conservatism using our proxies. Based on the literature, students with cognitive skills would try to avoid such a situation.

We use the following logistic regression models to test our expectations:

$$Conservatism_i = \beta_1 Female_i + Controls_i \quad (1)$$

$$Conservatism_i = \beta_1 \ln GPA_AllC_i + Controls_i \quad (2)$$

$$Conservatism_i = \beta_1 \ln GPA_AllC_i + \beta_2 Female_i + Controls_i \quad (3)$$

where $Conservatism_i$ refers to the proxies for student i 's conservatism level, $ConservatismT_i$ and $ConservatismC_i$. $Female_i$ equals 1 if student i is female and zero if student i is male. $\ln GPA_AllC_i$ is the log of student i 's GPA of all compulsory courses. The literature often uses GPA as a proxy for cognitive skills (See Heckman and Kautz (2012) for a review). Since high GPA of elective courses might be a result of students' conservatism to choose easier courses, we do not include these courses to have a cleaner measure of cognitive skills. We control for demography information including student i 's age when he/she enrolled in the University ($AgeEnroll_i$) and whether he/she is Han Chinese (Han_i). Han is the dominant ethnic group in China, especially in the more developed areas. We also control for whether student i took a second major ($Double_i$). Because a second major might distract the students' efforts to spend on other courses, students with a second major might be more likely to select easier GEE courses. We have *Enrollment Year FE*, *Gaokao Province FE* and *Specialization FE* to control for the differences of students across different cohorts, different Gaokao provinces and different specializations. Standard errors are clustered at the specialization level. Since students of the same

specialization and same cohort largely face the same pool of courses when the select GEE courses, the observed course selection results, which are used to construct *Conservatism*, could not be fully independent for students in each specialization. The regression results are shown in Table 3. The coefficients on *Female* and *lnGPA_AllC* are positive and significant in all specifications, consistent with our expectations.

5. Regression models

We use the following logistic regression models to test H1.

$$Major_Acct_i = \beta_1 Conservatism_i + Controls_i \quad (4)$$

$$Major_Acct_i = \beta_1 Conservatism_i + \beta_2 Female_i + Controls_i \quad (5)$$

Major_Acct_i equals one if student *i* is an accounting major student. *Conservatism_i* and *Female_i* are defined as in Eqs. (1)- (3). We do not include *Female* in Eq. (4) because it is strongly correlated with *Conservatism* and we firstly want to examine the overall impact of *Conservatism*. In Eq. (5), we are interested in the impact of *Conservatism*, holding *Female* constant. We hold *Female* constant because it can be proxy for other gender differences, such as discrimination. We control for the students' difference in academic performance using *lnGPA_GEC_i*, the log of the GPA of each student's GEC courses. To be admitted as an accounting major in the University, students should have higher Gaokao scores than students of most other majors. Since we do not have the students' Gaokao scores to capture the differences in academic performance between accounting students and non-accounting students, we use the students' scores of GEC courses as a proxy because every students are required to take the same courses with few exceptions. We also control for demography information including student *i*'s age when he/she enrolled in the University (*AgeEnroll_i*) and whether he/she is Han Chinese (*Han_i*). We also control for whether student *i* took a second major (*Double_i*) because it might affect both *Major_Acct_i* and *Conservatism_i*. On the one hand, a student who is interested to take a second major might be less likely to select accounting as their major since they can choose it as their second major. On the other hand, taking a second major might reduce the time and efforts the student would spend on his/her GEE courses and hence he/she might be more likely to take easier GEE courses. In all models, we have *Enrollment Year FE* and *Gaokao Province FE* to control for the difference of students coming from

different cohorts and different Gaokao provinces. Standard errors are clustered at the Gaokao province level. Students select their majors before they enroll in the University. Since high school students in the same Gaokao province face similar economic and social environments, their major choices could not be fully independent.

We run Eqs. (4) and (5) for two different samples. The first sample includes students of all majors. The second sample includes only students who are majoring in accounting or finance. We specifically use finance students as a benchmark for two reasons. First, both majors are pathways to business-related professional jobs. Second, since both majors generally require higher scores in Gaokao relative to other majors, students in these two majors are comparable in terms of academic performance.

We use the following logistic regression models to test H2.

$$Job_Audit_i = \beta_1 Conservatism_i + Controls_i \quad (6)$$

$$Job_Audit_i = \beta_1 Conservatism_i + \beta_2 Female_i + Controls_i \quad (7)$$

Job_Audit_i equals one if student i works as an auditor upon college graduation and zero otherwise. $Conservatism$ and $Female$ are defined as in Eqs. (1)- (3). We control for the log of GPA of all courses that student i has taken, excluding courses under a second degree ($lnGPA_i$). $lnGPA$ is a proxy for cognitive skills and might be an important criterion when audit firms select job candidates. We also control for whether student i took a second degree ($Double_i$), since an accounting student who took a second degree might be less likely to work in accounting related jobs. We also control for demography information including student i 's age when he/she graduated with a bachelor's degree ($AgeGraduate_i$) and whether he/she is Han Chinese (Han_i). We also control for the year when the student graduated with a bachelor's degree ($Graduation\ Year\ FE$), the Gaokao province ($Gaokao\ Province\ FE$) and the specialization ($Specialization\ FE$).

We use the following logistic regression models to test H3.

$$Audit_5yr_i = \beta_1 Conservatism_i + Controls_i \quad (8)$$

$$Audit_5yr_i = \beta_1 Conservatism_i + \beta_2 Female_i + Controls_i \quad (9)$$

$Audit_5yr_i$ equals one if student i stays in the auditing profession five years after college graduation and zero otherwise. The control variables are the same as in Eqs. (6) and (7). We use a subsample of H2

to test H3. They are the students who became auditors after college graduation. To be included in the sample, we also require that (1) the student graduated by 2013 to have at least five years of working experience by the end of 2018, the ending period of our CPA database, and (2) the student's first job after graduation is an auditor in Big 4 audit firms. These two requirements are imposed because we do not have the data when each auditor leaves the auditing profession, but only when each CPA leaves the auditing profession. Because of the "up or out" policy in Big 4 audit firms, if an auditor has not obtained a CPA license within a certain period, he/she cannot be promoted to manager level and can hardly work in Big 4 firms anymore. In general, the period is five years. An auditor holding a CPA license (hereafter referred to as "**CPA auditor**") is usually promoted to manager level at the end of the fifth year. Hence, if a student with at least five years' experience as a Big 4 auditor has not shown up in the CPA database, we can assume that he/she has left the auditing profession.¹¹ For a CPA auditor, we know from the CPA database the exact year he/she left the profession and we can determine if he/she has worked in the profession for at least five years before he/she left. However, we are not able to make the same assumption for non-Big 4 auditors because they can stay in the firms for more than five years without becoming a CPA. Out of the 794 students who became auditors after college graduation by 2013, only 37 became non-Big 4 auditors upon graduation.

As a robustness check, we consider the possibility that in Big 4 audit firms, non-CPA auditors with outstanding work performance might be promoted to deputy managers and will be further promoted to manager level after obtaining CPA license. We test this possibility using students who joined Big 4 firms by 2013 and have become CPAs by 2018 in our sample, 10% of them obtained CPAs in their sixth year and 6% obtained CPAs more than six years after they started to work. Hence, among the students who graduated in 2013, it is possible that a small proportion of them still stay in the Big 4 firms by 2018 although they have not obtained their CPA licenses. To address this problem, we rerun Eqs. (8) and (9) but only use the students who joined Big 4 firms by 2012 as the sample so we can observe whether they

¹¹ It is possible that some auditors who start their career in Big 4 firms might join non-Big 4 firms later and thus they can still stay in auditing profession even if they do not obtain CPA license five years after graduation. However, our data shows that switching from Big 4 firms to non-Big 4 firms is rare for non-CPAs. Among the 287 students who graduated from 2008 to 2013, joined Big 4 firms after graduation and have obtained CPA license by 2018, only 14 (4.9%) joined non-Big 4 audit firms before getting CPA licenses.

become CPAs six years after graduation. We do not further trim our sample because the possibility that Big 4 auditors stay in the profession without holding CPA license six years after work is very small (only 6% as mentioned).

6. Regression results

Table 4 shows the results whether students who are more conservative are more likely to be accounting majors. Panels A and B show the summary statistics and correlation table. Panel C shows the ranking of schools based on the average of *ConservatismT* or *ConservatismC* of all students in each school. School of Accounting ranks in the second place out of all the schools in the University using either *ConservatismT* or *ConservatismC*.

Panel D of Table 4 shows the regression results of Eqs. (4) and (5). The sample in Column (1) – Column (4) includes students of all majors. We find significant positive coefficients on *ConservatismT* and *ConservatismC*, whenever we include *Female* in the regression. Consistent with H1, this means that more conservative students are more likely to choose to major in accounting. We use Eq. (5) to illustrate the economic meaning of the results. Holding the control variables constant at their mean values, we find that raising *ConservatismT(ConservatismC)* from 25 percentile to 75 percentile increases the likelihood of choosing accounting major from 14.9 percent to 15.5 percent (from 14.1 percent to 16.2 percent). The sample in Column (5) to Column (8) includes only accounting and finance students. The coefficients on *ConservatismT* and *ConservatismC* are positive and significant in all the specifications. Hence, compared with finance students, accounting students are more conservative. We use Eq. (5) to illustrate the economic meaning of the results. Holding the control variables constant at their mean values, we find that raising *ConservatismT(ConservatismC)* from 25 percentile to 75 percentile increases the likelihood of choosing accounting major from 52.7 percent to 53.9 percent (from 50.6 percent to 56.2 percent).

Table 5 shows the results whether among accounting students, those who are more conservative are more likely to become auditors. Panels A and B show the summary statistics and correlation table. Panel C shows the regression results of Eqs. (6) and (7). None of the coefficients on *ConservatismT* or

ConservatismC are significant, whenever we include *Female* in the model. Hence, conditional on students having chosen accounting as their major, we have no evidence that their conservatism levels are associated with the probability to work as auditors after they earn a bachelor's degree.

Table 6 shows the results whether for accounting students whose have become auditors, more conservative students are more likely to stay in the profession for five years. Panels A and B show the summary statistics and correlation table. Panel C and Panel D show the regression results. The sample in Panel C are the students who graduated and joined Big 4 audit firms by 2013. The coefficients on *ConservatismT* or *ConservatismC* are positive and significant, regardless of whether we include *Female* in the model. Hence, there is a positive relation between conservatism and the possibility for the auditors to stay in the auditing profession for five years. We use Eq. (9) to illustrate the economic meaning. Holding the control variables constant at their mean values, raising *ConservatismT*(*ConservatismC*) from 25 percentile to 75 percentile increases the likelihood of staying in auditing profession from 12.0 percent to 17.2 percent (from 12.1 percent to 17.1 percent). The positive relation is consistent with Chen et al. (2017) who find that reporting aggressiveness is negatively associated with auditors' promotion outcomes. The sample in Panel D includes the accounting students who graduated and joined Big 4 audit firms by 2012. We obtained similar results.

7. Further tests

Among the students who worked as auditors upon college graduation, 49% are accounting students. See Panel A of Table 7 for the number of students who become auditors upon graduation for each school. Since non-accounting students also constitute a large portion, we examine (1) whether their conservatism is related to the likelihood of being auditors after college graduation, and (2) among those who have become auditors, whether conservatism is related to the likelihood of working for more than five years in the auditing profession.

To examine the first question, we use modified models of Eqs. (6) and (7) by adding one more control variable, *Double_acct*, which equals one if the student's second major is accounting and zero if the student does not have a second major or his/her second major is not accounting. Our sample includes

students from three other schools. They are all business-related and each of them constitutes around 10% of all the students working as auditors upon college graduation. The rest of non-accounting schools each constitutes less than 5%, implying that the students in these schools might not be interested to work as auditors. Hence, we do not include their students in the sample.

Panel B in Table 7 reports the results. Similar as for accounting students, none of the coefficients of *ConservatismT* and *ConservatismC* is significant. It shows no evidence that, among non-accounting students, more conservative students are more likely to choose to work as auditors after earning a bachelor's degree.

To test whether, conditional on becoming auditors after earning a bachelor's degree, more conservative students are more likely to work for more than five years, we run the modified Eqs. (6) and (7) with *Double_acct* added, using non-accounting students who became Big 4 auditors upon graduation by 2013 as the sample. Panel C in Table 7 reports the results. All of the coefficients on *ConservatismT* and *ConservatismC* are positive but only the coefficients on *ConservatismC* are significant, providing weak support that among non-accounting students who become auditors, more conservative auditors are more likely to work for more than five years.

8. Conclusion

The objective of this study is to examine whether and why auditors are more conservative. To overcome the challenge to have a yardstick to compare the conservatism levels of auditors and non-auditors, we take advantage of a dataset in one major university in China with detailed information about student's coursework and placement. We create a new way to measure conservatism based on the notion that more conservative students are more likely to select GEE courses that are easier to get an A. To examine our research question, we ask three specific questions along the students' career path. First, are more conservative students more likely to choose accounting as their major? Second, among accounting students, are more conservative students more likely to become auditors? Third, among accounting students who become auditors, are more conservative students more likely to stay in the auditing profession after a few years?

Our empirical findings are as below. First, we find that more conservative students are more likely to choose accounting as their major. Moreover, more conservative students are more likely to choose accounting than finance as their major. We compare with finance major because finance students are most comparable to accounting students in terms of the interest in pursuing a business-related professional job and their performance in the Gaokao. Second, we focus on accounting students to examine the relation between conservatism and the likelihood of being an auditor after obtaining a bachelor's degree. However, we do not find evidence that more conservative students are more likely to become auditors. Finally, we focus on accounting students who have become auditors. We find that more conservative auditors are more likely to stay in the auditing profession for at least five years.

Our results illustrate that more conservative students are more likely to become auditors. It provides a possible explanation of accounting conservatism - The audited financial reports are likely to be conservative independent of the institutional environment, which is found as the main source of accounting conservatism in the literature. Currently, our sample is not large enough to directly test whether the students' conservatism is related to the conservatism of their audit opinion. Although listing companies in China are required to disclose the names of signing auditors, who can be a partner and a senior manager (Gul et al. 2013), very few auditors in our sample have reached the level to signed audit reports for listing companies in China. This will be left for future research.

Table 1. Sample selection

Procedure	# of observations
Dataset I	
All students who enrolled in the University from 2004 to 2014	22,060
Students missing Gaokao province data	(622)
Students missing both <i>ConservatismT</i> and <i>ConservatismC</i>	(9)
Final sample of Dataset I (All students without missing data)	21,429
Including: Students who are accounting majors	3,627
Dataset II	
Students who are accounting majors	3,627
Students missing graduation data	(5)
Students from overseas	(19)
Students whose jobs are predetermined before entering the University	(17)
Students who do not work after earning a bachelor's degree	(939)
Final sample of Dataset II (Accounting students without missing data)	2,647
Including: Students who work as auditors after earning a bachelor's degree	1,364
Dataset III	
Students who work as auditors after earning a bachelor's degree	1,364
Students who graduate from 2014 onwards	(570)
Students who work as non-Big auditors	(37)
Final sample of Dataset III	757
Including: Students who work as auditors for more than 5 years	129
(Dataset IV)	

Table 2. Number of GEE courses

Panel A. Courses used to compute *ConservatismT*, courses are defined as a 4-tuple (x,t,s,y)

	Number of courses
All GEE courses with a teacher identity	1,523
Missing $\Pi(t,y-1)$	(362)
Deleted as the only course in the category	(15)
Final number of GEE courses	1,146

Note:

Missing of $\Pi(t,y-1)$ is mainly for courses in:

- (1) the first academic year in our sample (2004-2005),
- (2) the second academic year (2005-2006), because most of the first cohort of students in our sample started to take GEE courses from academic year 2005 when they are in the sophomore grade, we do not have much information for $\Pi(t,2004)$
- (3) Academic Year 2014-2015, 2015-2016, and 2016-2017 because from the students who enrolled in 2014, the University greatly increased the credits of GEE courses they should take and provided far more courses for selection, and thus assigned more teachers to teach GEE courses.

Panel B. Courses used to compute *ConservatismC*, courses are defined as a 3-tuple (x,s,y)

	Number of courses
Unique GEE course codes	1,389
Missing $\Pi(x,y-1)$	(383)
Deleted as the only course in the category	(29)
Final number of GEE courses	977

Note: For similar reasons as in Panel A, missing $\Pi(x,y-1)$ is mainly for courses in Academic Year 2004-2005, 2005-2006, 2014-2015, 2015-2016 and 2016-2017.

Table 3. Validation tests

	Dependent Variable=					
	<i>ConservatismT</i>	<i>ConservatismC</i>	<i>ConservatismT</i>	<i>ConservatismC</i>	<i>ConservatismT</i>	<i>ConservatismC</i>
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Female</i>	0.014*** (0.000)	0.005** (0.018)			0.010*** (0.000)	0.000 (0.928)
<i>lnGPA_AllC</i>			0.046*** (0.000)	0.040*** (0.000)	0.037*** (0.000)	0.040*** (0.000)
<i>Han</i>	0.000 (0.932)	0.003 (0.524)	-0.002 (0.583)	0.001 (0.863)	-0.001 (0.712)	0.001 (0.861)
<i>AgeEnroll</i>	-0.003* (0.096)	-0.001 (0.513)	-0.003* (0.059)	-0.001 (0.683)	-0.002 (0.147)	-0.001 (0.691)
<i>Double</i>	0.007** (0.012)	0.009*** (0.001)	0.004 (0.172)	0.006** (0.018)	0.004 (0.185)	0.006** (0.019)
<i>Constant</i>	0.619*** (0.000)	0.608*** (0.000)	0.590*** (0.000)	0.567*** (0.000)	0.581*** (0.000)	0.567*** (0.000)
Enrollment Year FE	Y	Y	Y	Y	Y	Y
Specialization FE	Y	Y	Y	Y	Y	Y
Gaokao Province FE	Y	Y	Y	Y	Y	Y
<i>N</i>	21,401	21,380	21,400	21,380	21,400	21,380
adj. R^2	0.065	0.074	0.066	0.076	0.067	0.076

The table shows the results of OLS regression of each students' conservatism level on female or cognitive skills or both for all students enrolled in the university from 2004 to 2014. See Appendix B for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles. p -values presented in parentheses are based on standard errors clustered at the specialization level. Superscripts ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively.

Table 4. Major choice

Panel A. Summary statistics for Dataset I

	N	mean	p50	S.D.	min	p25	p75	max
Students of all majors								
<i>Major_Acct</i>	21,429	0.169	0.000	0.375	0.000	0.000	0.000	1.000
<i>ConservatismT</i>	21,401	0.589	0.592	0.138	0.237	0.497	0.684	0.906
<i>ConservatismC</i>	21,380	0.611	0.615	0.134	0.273	0.520	0.704	0.917
<i>Female</i>	21,401	0.591	0.595	0.139	0.250	0.498	0.688	0.917
<i>lnGPA_GEC</i>	21,380	0.622	0.625	0.132	0.295	0.532	0.713	0.927
<i>AgeEnroll</i>	21,429	0.627	1.000	0.484	0.000	0.000	1.000	1.000
<i>Han</i>	21,428	1.121	1.164	0.171	0.466	1.045	1.243	1.345
<i>Double</i>	21,429	18.389	18.000	0.722	17.000	18.000	19.000	21.000
Students major in accounting or finance								
<i>Major_Acct</i>	6,817	0.532	1.000	0.499	0.000	0.000	1.000	1.000
<i>ConservatismT</i>	6,803	0.592	0.594	0.136	0.237	0.501	0.683	0.906
<i>ConservatismC</i>	6,804	0.615	0.619	0.134	0.273	0.526	0.710	0.917
<i>Female</i>	6,803	0.599	0.602	0.136	0.250	0.508	0.693	0.917
<i>lnGPA_GEC</i>	6,804	0.629	0.630	0.131	0.295	0.542	0.719	0.927
<i>AgeEnroll</i>	6,817	0.685	1.000	0.465	0.000	0.000	1.000	1.000
<i>Han</i>	6,817	1.144	1.185	0.162	0.466	1.072	1.259	1.345
<i>Double</i>	6,817	18.331	18.000	0.655	17.000	18.000	19.000	21.000

Panel B. Correlation matrix

Students of all majors								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) <i>Major_Acct</i>	1.00							
(2) <i>ConservatismT</i>	0.02***	1.00						
(3) <i>ConservatismC</i>	0.04***	0.56***	1.00					
(4) <i>Female</i>	0.11***	0.05***	0.02**	1.00				
(5) <i>lnGPA_GEC</i>	0.09***	0.05***	0.07***	0.30***	1.00			
(6) <i>AgeEnroll</i>	-0.05***	-0.02***	-0.01	-0.12***	-0.09***	1.00		
(7) <i>Han</i>	0.03***	0.01**	0.02**	-0.01	0.11***	-0.15***	1.00	
(8) <i>Double</i>	-0.10***	0.02***	0.03***	0.07***	0.20***	-0.03***	0.05***	1.00
Students majoring in accounting or finance								
(1) <i>Major_Acct</i>	1.00							
(2) <i>ConservatismT</i>	0.03**	1.00						
(3) <i>ConservatismC</i>	0.07***	0.53***	1.00					
(4) <i>Female</i>	0.15***	0.05***	0.02**	1.00				
(5) <i>lnGPA_GEC</i>	0.07***	0.07***	0.09***	0.25***	1.00			
(6) <i>AgeEnroll</i>	-0.03**	-0.02*	0.01	-0.13***	-0.08***	1.00		
(7) <i>Han</i>	0.01	0.00	-0.00	-0.02	0.09***	-0.07***	1.00	
(8) <i>Double</i>	-0.06***	0.05***	0.04***	0.03**	0.13***	-0.02*	0.04***	1.00

Panel C. Conservatism in different schools [Data pending approval to release]

Panel D. Logit regression (Dataset I)

	Dependent Variable= <i>Major_Acct</i>							
	Students of all majors				Students majoring in accounting or finance			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>ConservatismT</i>	0.317*** (0.008)		0.267** (0.029)		0.310** (0.026)		0.264* (0.074)	
<i>ConservatismC</i>		0.856*** (0.000)		0.876*** (0.000)		1.223*** (0.000)		1.226*** (0.000)
<i>Female</i>			0.561*** (0.000)	0.570*** (0.000)			0.590*** (0.000)	0.597*** (0.000)
<i>lnGPA_GEC</i>	2.016*** (0.000)	2.008*** (0.000)	1.515*** (0.000)	1.493*** (0.000)	1.063*** (0.000)	1.043*** (0.000)	0.610*** (0.000)	0.582*** (0.001)
<i>AgeEnroll</i>	-0.148*** (0.000)	-0.151*** (0.000)	-0.109*** (0.000)	-0.112*** (0.000)	-0.055 (0.125)	-0.058 (0.113)	-0.003 (0.929)	-0.006 (0.862)
<i>Han</i>	-0.036 (0.783)	-0.040 (0.759)	0.000 (0.998)	-0.002 (0.987)	-0.181 (0.130)	-0.192 (0.105)	-0.140 (0.288)	-0.150 (0.256)
<i>Double</i>	-0.988*** (0.000)	-0.995*** (0.000)	-1.000*** (0.000)	-1.008*** (0.000)	-0.433*** (0.000)	-0.441*** (0.000)	-0.437*** (0.000)	-0.445*** (0.000)
<i>Constant</i>	-0.906 (0.105)	-1.165** (0.034)	-1.440** (0.012)	-1.745*** (0.002)	0.137 (0.826)	-0.345 (0.588)	-0.722 (0.268)	-1.238* (0.060)
Enrollment	Y	Y	Y	Y	Y	Y	Y	Y
Year FE								
Gaokao	Y	Y	Y	Y	Y	Y	Y	Y
Province								
<i>N</i>	21,400	21,380	21,400	21,380	6,803	6,804	6,803	6,804
pseudo <i>R</i> ²	0.043	0.045	0.051	0.054	0.018	0.022	0.030	0.034

The table reports the results of logistic regression of whether more conservative students are more likely to choose to major in accounting based on students enrolled in the University from 2004 to 2014. Panel A shows the descriptive statistics of the regression variables. Panel B shows the correlation matrix. Panel C shows the ranking of schools based on the average of *ConservatismT* or *ConservatismC* of all students in each school. Panel D reports the regression results. Column (1) to Column (4) use students of all majors as the sample. Column (5) to Column (8) use only students majoring in accounting or finance. See Appendix B for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles. *p*-values presented in parentheses are based on standard errors clustered at the Gaokao Province level. *, **, and *** denote significance at 10%, 5%, and 1% levels (two-tailed), respectively.

Table 5. Likelihood of being an auditor after college graduation for accounting students

Panel A. Summary statistics for Dataset II

	N	mean	p50	S.D.	min	p25	p75	max
<i>Job_Audit</i>	2,647	0.515	1.000	0.500	0.000	0.000	1.000	1.000
<i>ConservatismT</i>	2,643	0.597	0.595	0.133	0.237	0.506	0.687	0.906
<i>ConservatismC</i>	2,644	0.624	0.628	0.132	0.273	0.537	0.717	0.917
<i>Female</i>	2,647	0.740	1.000	0.438	0.000	0.000	1.000	1.000
<i>AgeGraduate</i>	2,647	22.358	22.000	0.655	21.000	22.000	23.000	25.000
<i>Han</i>	2,647	0.940	1.000	0.238	0.000	1.000	1.000	1.000
<i>lnGPA</i>	2,647	1.160	1.200	0.145	0.489	1.105	1.258	1.345
<i>Double</i>	2,647	0.115	0.000	0.319	0.000	0.000	0.000	1.000

Panel B. Correlation matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) <i>Job_Audit</i>	1.00							
(2) <i>ConservatismT</i>	0.03	1.00						
(3) <i>ConservatismC</i>	-0.00	0.53***	1.00					
(4) <i>Female</i>	0.04**	0.03	0.01	1.00				
(5) <i>AgeGraduate</i>	-0.07***	-0.02	0.01	-0.10***	1.00			
(6) <i>Han</i>	0.08***	0.03	0.02	-0.01	-0.00	1.00		
(7) <i>lnGPA</i>	0.29***	0.05***	0.07***	0.30***	-0.09***	0.10***	1.00	
(8) <i>Double</i>	-0.01	0.07***	0.05**	-0.00	-0.03	0.05***	0.12***	1.00

Panel C. Logit regression

	DV= <i>Job_Audit</i>			
	(1)	(2)	(3)	(4)
<i>ConservatismT</i>	-0.183 (0.599)		-0.192 (0.582)	
<i>ConservatismC</i>		-0.335 (0.360)		-0.342 (0.351)
<i>Female</i>			-0.353*** (0.001)	-0.346*** (0.001)
<i>lnGPA</i>	5.158*** (0.000)	5.160*** (0.000)	5.611*** (0.000)	5.605*** (0.000)
<i>Double</i>	-0.225* (0.098)	-0.210 (0.122)	-0.253* (0.063)	-0.238* (0.081)
<i>AgeGraduate</i>	-0.102 (0.139)	-0.105 (0.131)	-0.120* (0.084)	-0.122* (0.080)
<i>Han</i>	0.392* (0.069)	0.393* (0.068)	0.375* (0.083)	0.377* (0.082)
<i>Constant</i>	-3.591** (0.031)	-3.440** (0.038)	-3.381** (0.042)	-3.244* (0.052)
Graduation Year FE	Y	Y	Y	Y
Gaokao Province FE	Y	Y	Y	Y
Specialization FE	Y	Y	Y	Y
<i>N</i>	2640	2641	2640	2641
pseudo <i>R</i> ²	0.139	0.140	0.142	0.143

The table reports the results of logistic regression of whether conditional on majoring in accounting, more conservative students are more likely to become auditors after college graduation, based on accounting students enrolled in the University from 2004 to 2014. Panel A shows the descriptive statistics of the regression variables. Panel B shows the correlation matrix. Panel C reports the regression results. See Appendix B for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles. *p*-values are presented in parentheses. *, **, and *** denote significance at 10%, 5%, and 1% levels (two-tailed), respectively.

Table 6. Likelihood for accounting students in Big 4 firms to work for more than 5 years

Panel A. Summary statistics

	N	mean	p50	S.D.	min	p25	p75	max
Dataset III								
<i>Audit_5yr</i>	757	0.170	0.000	0.376	0.000	0.000	0.000	1.000
<i>ConservatismT</i>	755	0.621	0.624	0.129	0.237	0.542	0.710	0.906
<i>ConservatismC</i>	757	0.653	0.658	0.124	0.300	0.560	0.746	0.917
<i>Female</i>	757	0.617	0.619	0.129	0.250	0.533	0.696	0.917
<i>AgeGraduate</i>	757	0.655	0.662	0.120	0.299	0.573	0.742	0.927
<i>Han</i>	757	0.782	1.000	0.413	0.000	1.000	1.000	1.000
<i>lnGPA</i>	757	22.340	22.000	0.588	21.000	22.000	23.000	25.000
<i>Double</i>	757	0.976	1.000	0.152	0.000	1.000	1.000	1.000
Dataset IV								
<i>Female</i>	129	1.000	1.000	0.000	1.000	1.000	1.000	1.000
<i>ConservatismT</i>	129	0.651	0.655	0.128	0.344	0.567	0.732	0.906
<i>ConservatismC</i>	129	0.673	0.667	0.119	0.338	0.600	0.756	0.908
<i>lnGPA</i>	129	0.639	0.644	0.135	0.319	0.549	0.730	0.917
<i>AgeGraduate</i>	129	0.669	0.675	0.124	0.359	0.583	0.743	0.927
<i>Han</i>	129	0.806	1.000	0.397	0.000	1.000	1.000	1.000
<i>Double</i>	129	22.333	22.000	0.564	21.000	22.000	23.000	25.000

Panel B. Correlation table for Dataset III

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) <i>Audit_5yr</i>	1.00							
(2) <i>ConservatismT</i>	0.11***	1.00						
(3) <i>ConservatismC</i>	0.07*	0.58***	1.00					
(4) <i>Female</i>	0.08**	0.75***	0.48***	1.00				
(5) <i>AgeGraduate</i>	0.05	0.55***	0.79***	0.61***	1.00			
(6) <i>Han</i>	0.03	0.02	-0.08**	0.05	-0.06*	1.00		
(7) <i>lnGPA</i>	-0.01	-0.01	0.01	-0.05	-0.03	-0.07*	1.00	
(8) <i>Double</i>	0.05	0.05	0.00	0.06	0.04	-0.06*	0.06*	1.00

Panel C. Logit regression for accounting students

	Dependent Variable= <i>Audit_5yr</i>							
	Students graduated by 2013				Students graduated by 2012			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>ConservatismT</i>	2.489*** (0.006)		2.487*** (0.006)		2.532*** (0.006)		2.527*** (0.007)	
<i>ConservatismC</i>		2.226** (0.014)		2.181** (0.017)		1.949** (0.034)		1.898** (0.040)
<i>Female</i>			-0.267 (0.336)	-0.237 (0.394)			-0.285 (0.319)	-0.260 (0.362)
<i>lnGPA</i>	4.482*** (0.003)	4.572*** (0.002)	4.827*** (0.002)	4.873*** (0.001)	4.751*** (0.002)	4.831*** (0.002)	5.126*** (0.001)	5.170*** (0.001)
<i>Double</i>	0.180 (0.542)	0.178 (0.544)	0.151 (0.612)	0.152 (0.607)	0.223 (0.458)	0.221 (0.459)	0.190 (0.531)	0.190 (0.527)
<i>AgeGraduate</i>	0.061 (0.749)	0.062 (0.747)	0.049 (0.799)	0.053 (0.784)	0.046 (0.814)	0.047 (0.811)	0.033 (0.865)	0.037 (0.849)
<i>Han</i>	1.680 (0.177)	1.670 (0.176)	1.643 (0.186)	1.640 (0.184)	1.771 (0.170)	1.751 (0.168)	1.721 (0.181)	1.710 (0.177)
<i>Constant</i>	-12.222** (0.014)	-12.073** (0.015)	-12.073** (0.015)	-11.951** (0.016)	-12.437** (0.015)	-12.043** (0.018)	-12.318** (0.016)	-11.949** (0.019)
Graduation Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Gaokao Province FE	Y	Y	Y	Y	Y	Y	Y	Y
Specialization FE	Y	Y	Y	Y	Y	Y	Y	Y
<i>N</i>	712	714	712	714	612	614	612	614
pseudo <i>R</i> ²	0.104	0.101	0.105	0.102	0.084	0.080	0.086	0.081

The table reports the results of logistic regression for whether conditional on entering the auditing profession, more conservative auditors are more likely to remain in the auditing profession five years after college graduation. Panel A shows the descriptive statistics. Panel B shows the correlation matrix. Panel C reports the regression results. The sample of Column (1) to Column (4) [Column (5) to Column (8)] include accounting students who worked as Big 4 auditors upon college graduation and graduated by 2013 (2012). See Appendix B for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles. *p*-values are presented in parentheses. *, **, and *** denote significance at 10%, 5%, and 1% levels (two-tailed), respectively.

Table 7. Non-accounting students

Panel A. Percentage of students who become auditors after college graduation by school

[Data pending approval to release]

Panel B. Logit regression of job selection after earning a bachelor's degree

	Dependent Variable = <i>Job_Audit</i>			
	(1)	(2)	(3)	(4)
<i>ConservatismT</i>	0.260 (0.376)		0.321 (0.276)	
<i>ConservatismC</i>		0.176 (0.553)		0.180 (0.547)
<i>Female</i>			-0.385*** (0.000)	-0.374*** (0.000)
<i>lnGPA</i>	3.891*** (0.000)	3.913*** (0.000)	4.479*** (0.000)	4.489*** (0.000)
<i>Double</i>	-0.153 (0.190)	-0.157 (0.179)	-0.148 (0.205)	-0.152 (0.193)
<i>Double_acct</i>	0.326 (0.118)	0.317 (0.128)	0.319 (0.126)	0.309 (0.139)
<i>AgeGraduate</i>	-0.048 (0.426)	-0.054 (0.368)	-0.073 (0.223)	-0.079 (0.186)
<i>Han</i>	0.350* (0.068)	0.326* (0.089)	0.330* (0.086)	0.303 (0.116)
<i>Constant</i>	-4.551*** (0.002)	-4.368*** (0.003)	-4.409*** (0.003)	-4.181*** (0.005)
Graduation Year FE	Y	Y	Y	Y
Gaokao Province FE	Y	Y	Y	Y
Specialization FE	Y	Y	Y	Y
<i>N</i>	5559	5562	5559	5562
pseudo <i>R</i> ²	0.093	0.094	0.097	0.097

Panel C. Logit regression for the likelihood of staying in auditing profession five years after graduation

	Dependent Variable= <i>Audit_5yr</i>			
	(1)	(2)	(3)	(4)
<i>ConservatismT</i>	0.648 (0.546)		0.691 (0.522)	
<i>ConservatismC</i>		3.305*** (0.007)		3.326*** (0.006)
<i>Female</i>			-0.156 (0.629)	-0.176 (0.594)
<i>lnGPA</i>	4.831*** (0.010)	4.924** (0.010)	5.212** (0.011)	5.372** (0.011)
<i>Double</i>	-0.016 (0.964)	-0.017 (0.963)	-0.022 (0.951)	-0.020 (0.955)
<i>Double_acct</i>	-0.257 (0.599)	-0.305 (0.537)	-0.251 (0.608)	-0.301 (0.542)
<i>AgeGraduate</i>	0.143 (0.557)	0.186 (0.445)	0.131 (0.591)	0.170 (0.489)
<i>Han</i>	-1.495* (0.076)	-1.291 (0.136)	-1.481* (0.080)	-1.278 (0.141)
<i>Constant</i>	-10.157* (0.084)	-13.267** (0.027)	-10.263* (0.081)	-13.319** (0.026)
Graduation Year FE	Y	Y	Y	Y
Gaokao Province FE	Y	Y	Y	Y
Specialization FE	Y	Y	Y	Y
<i>N</i>	511	513	511	513
pseudo <i>R</i> ²	0.159	0.176	0.159	0.176

The table reports the results of logistic regression for non-accounting students. Panel A shows the percentage of students becoming auditors upon college graduation for each school. Panel B shows the regression results whether the students' conservatism level is associated with their propensity to become auditors after graduation. The sample includes three non-accounting schools that each of which constitutes a substantial percentage (around 10 percent) of all the students who work as auditors upon college graduation. Panel C shows the regression results whether conditional on entering the auditing profession, more conservative auditors are more likely to remain in the auditing profession five years after college graduation. The sample includes non-accounting students who worked as Big 4 auditors upon college graduation and graduated by 2013. See Appendix B for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles. *p*-values are presented in parentheses. *, **, and *** denote significance at 10%, 5%, and 1% levels (two-tailed), respectively.

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Appendix A. The process to merge the student database and the CPA database

To improve the efficiency of the matching, we first remove the following CPAs from the CPA database:

- (1) CPAs who obtained their licenses before 2010, because the first batch of our students graduated from the University in 2008 and two years of working experience are required to become a CPA.
- (2) CPAs with highest education level lower than a bachelor's degrees, and
- (3) CPAs graduated from other universities

Next, we merge the two databases based on the following requirements:

- (1) Same name and gender in the two databases
- (2) If the student's job is an auditor upon graduation, the number of years from graduation (from the student database) to register as a CPA (from the CPA database) must be at least 2 years, to satisfy the working experience required to become a CPA. If the student's job upon graduation is not an auditor, the number of years from graduation (from the student database) to register as a CPA (from the CPA database) must be at least 3 years, assuming that the student will start to work as an auditor at least one year after graduation.
- (3) We assume that the time for a CPA to pass CPA exams (from the CPA database) must be after the time they start undergraduate studies (from the student database).
- (4) We assume that the CPA's audit firms when the he/she obtained the license (from the CPA database) should be in the same province/municipality where the student's job upon graduation is (from the student database). By doing so, we assume that the working place of an individual is stable across years.
- (5) The major information in the two databases must be consistent.
- (6) After meeting all the above requirements, we still have some students matched to multiple CPAs.

The names of these students have only 2 Chinese characters, for whom the chance of mismatching is higher than students whose names have 3 Chinese characters or more. To minimize the chance

of mismatching, we remove all the matched observations, unless the CPA's audit firm when he/she obtained the license (from the CPA database) is the same as the firm the student worked upon graduation (from the student database).

See Table A1 for the number of observations removed to satisfy each requirement.

Table A1. Matching the student database with the CPA database

	# of matching for students whose names have 2 Chinese characters	# of matching for students whose names have 3 Chinese characters or more	Total
Matching procedure:			
(1) match by name and gender	3,906	554	4,460
(2) require two years of working experience if the student's job is an auditor upon graduation, and three years of working experience if the student's job is not an auditor upon graduation	(2,114)	(177)	(2,291)
(3) assume that the student passed the CPA exams after he/she started undergraduate study	(68)	0	(68)
(4) require the CPA's audit firm when he/she obtained the license to be in the same province/municipality where the student's job upon graduation is	(1,342)	(150)	(1,492)
(5) require no conflict information of major	(68)	(3)	(71)
(6) If the student's name has only 2 Chinese characters, remove all the matched observations if one student is matched to multiple CPAs, unless the CPA's audit firm when he/she obtained the license is the same as the student's job upon graduation	(54)	NA	(54)
Remaining	255	224	479
Including: Students who work as auditors upon college graduation	144	185	329

Appendix B. Variable definition

Variable	Definition
<i>AgeEnroll</i>	Age when the student enrolled in the University for undergraduate study
<i>AgeGraduate</i>	Age when the student graduate with a bachelor's degree in the University
<i>Audit_5yr</i>	Equals one if the student has worked in an audit firm for at least 5 years, and zero otherwise
<i>Conservatism</i> (<i>ConservatismT</i> , <i>ConservatismC</i>)	See Section 4 for the construction process.
<i>Double</i>	Equals one if the student takes a second degree, and zero otherwise
<i>Double_acct</i>	Equals one if the student takes a second degree in accounting, and zero otherwise
<i>Enrollment Year</i>	The calendar year when the student was enrolled in the University. It takes the value of 2004 to 2014. For example, if a student was enrolled in the University in 2004, the value is 2004.
<i>Female</i>	Equals one if the student is a female, and zero otherwise
<i>Graduation Year</i>	The calendar year when the student graduated from the University with a bachelor's degree
<i>Han</i>	Equals one if the student is Han Chinese, and zero otherwise
<i>Job_Audit</i>	Equals one if the student's job upon college graduation in an auditor, and zero otherwise
<i>lnGPA</i>	Log of the overall GPA for all courses the student has taken, excluding courses taken under a second degree
<i>lnGPA_AllC</i>	Log of the GPA for all compulsory courses, excluding courses taken under a second degree
<i>lnGPA_GEC</i>	Log of the GPA for all compulsory general education courses
<i>Major</i>	The student's major
<i>Specialization</i>	The student's specialization. In the cases when a major is not subdivided into different specializations, we code the specialization the same as the major.
<i>Gaokao Province</i>	For students from mainland China, it is the province where the student took Gaokao. For overseas student, it is equal to "Overseas".
<i>Major_Acct</i>	Equals one if the student is an accounting major and zero otherwise