



# A multilevel study of students' motivations of studying accounting

## Implications for employers

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### Abstract

**Purpose** – The purpose of this study is to examine the influence of factors affecting students' choice of accounting as a study major in Hong Kong.

**Design/methodology/approach** – Multinomial logistic regression and Hierarchical Generalized Linear Modeling (HGLM) are used to analyze the survey data for the level one and level two data, which is the first time such an approach has been used in the literature. Twenty semi-structured interviews are conducted.

**Findings** – Results reveal that parental influence has the highest explanatory power among all three groups of students (i.e. accounting major, accounting minor, and other majors). This finding reflects the inculcation in students of the Confucian cultural norms ingrained in Chinese societies. Intrinsic interest is the second most important influencing factor reported by students. Two factors, "intrinsic interest" (attitude towards the behavior) and "parental influence" (subjective norm) in the multinomial logistic regressions and HGLM make significant contributions to predicting a student's decision to major in accounting for the level one (undergraduate) and level two model (master's students). The results support the theory of reasoned action (TRA) model. "First accounting course," "high school accounting," and "financial rewards" are not found to be factors influencing the decision to major in accounting, in contrast to the findings of the literature prior to the Enron scandal. Females are more likely to choose accounting as a major or minor than are males in the level one and level two models.

**Practical implications** – The findings indicate that Hong Kong universities and the Hong Kong Institute of Certified Public Accountants (HKICPA) need to promote accounting to improve the current negative image of the profession to attract more bright students, who traditionally might choose a non-accounting major.

**Originality/value** – The findings of this study extend the application of the TRA model to the accounting profession. Besides, results provide insights for employers to better understand the mindsets of potential accounting graduates.

**Keywords** Accounting students, Theory of reasoned action model, Accounting major, Accounting education, Hong Kong

**Paper type** Research paper

### 1. Introduction

It is estimated that in China, 350,000 qualified accountants are needed, but only about 130,000 accountants are qualified members of the Chinese Institute of Certified Public Accountants (SCMP, 2008a). In Hong Kong, a Special Administrative Region of China, the employment market in the accounting sector is strong. The recruitment trend has been strengthened by employers in China recruiting accounting professionals at all levels from Hong Kong. Therefore, the prospects of accounting graduates are promising in the Asia Pacific region, and that motivates us to conduct a study of students' motivations of choosing accounting in Hong Kong.

Prior studies have examined the factors influencing the decision of accounting students to major in accounting (Cohen and Hanno, 1993; Saemann and Crooker, 1999; Geiger and Ogilby, 2000; Jackling, 2002), however, their lack of the use of a theoretical



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model makes difficult the drawing of inferences or generalizations. Though some researchers have used the theory of reasoned action (TRA) to examine influences on choice of accounting (Tan and Laswad, 2006; Jackling and Keneley, 2009), their studies are based on the New Zealand and Australian context. This study's main contribution is its focus on Hong Kong. Hong Kong's sovereignty was transferred from Britain back to China in 1997. It is interesting to extend the study in this "Pearl of the Orient" (Hong Kong) that has a mixed culture from China and Britain. Tan and Laswad (2006) suggest that future research could explore the effect of culture on students' choice of study major in other countries.

### 1.1 The Hong Kong study

This research differs from the previous research in a number ways. First, it employed a TRA model to examine the issue in the Hong Kong environment whereas prior studies conducted in the USA and Australia have used only *ad hoc* surveys (Saemann and Crooker, 1999; Geiger and Ogilby, 2000; Jackling and Calero, 2006). The use of a formal model can help to identify the existence of a theoretical relationship between the underlying constructs and the behavior examined (Cohen and Hanno, 1993). Second, because prior researchers have employed only the survey method (Geiger and Ogilby, 2000; Tan and Laswad, 2006; Jackling and Keneley, 2009), they could not obtain the information that can be captured in a qualitative study (Quick and Rasmussen, 2005). Likewise, purely qualitative research is open to the criticism of being subjective and biased (Hoque and Hopper, 1994; Cavana *et al.*, 2001). Hence, this study would employ both approaches to examine the issue. Besides, prior research results (Cohen and Hanno, 1993; Saemann and Crooker, 1999; Geiger and Ogilby, 2000; Jackling and Calero, 2006; Tan and Laswad, 2006; Jackling and Keneley, 2009) suffer a limitation in that these studies examine factors relating to only two dependent variables: to choose accounting as a major or to choose a non-accounting major. However, changes in business environments and university curricula have resulted in the creation of degrees that allow students to major in one subject and minor in another. This is common in universities in Hong Kong, Macau, Taiwan, Australia, Canada, and the USA. The Big 4 accounting firms are keen to recruit those graduates. In order to have a comprehensive examination of the issue, this study endeavors to include students who choose accounting as their minor as well. Therefore, the current study examines a sample of Hong Kong students, and that is something we might be interested in, given the direction of the world economy and international business.

Finally, this study also further extends the research on the master's students. Level 2 data include intrinsic interest in the TRA model, subjective norm in the TRA model, and gender. Respondents at the master's level are regarded as the level 2 model in the hierarchical generalized linear modeling (HGLM). Sophisticated statistical program Hierarchical Linear Modeling (HLM) version 6.08 (Bryk and Raudenbush, 2002) is employed to analyze the level 2 model. HGLM is a multilevel powerful analysis that can assess the relationships between level 2 data (master level) and the level 1 data (undergraduate level) at the same time (Snijders and Bosker, 1999; Bryk and Raudenbush, 2002).

In view of the inadequacies of prior studies, the dependent variables in this study included accounting minor, accounting major, and other major groups. Given the theoretical underpinnings of the present study, the insufficient results of prior studies, and that no research into this issue has been conducted in this "Pearl of the Orient" (Hong Kong, China), it is hoped that the results of this study will make a contribution not only to the literature in the Asia Pacific regions but also to the western counterparts for curriculum design and improvement.

**2. Literature review and hypothesis development**

Through a review of literature, the following variables were included: intrinsic interest (attitudes or beliefs in the TRA model), parental influence (subjective norm in the TRA model), first year accounting course, high school accounting (HSA), financial rewards, and gender.

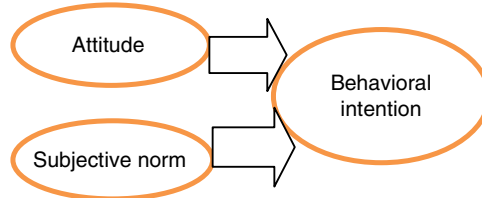
*2.1 The TRA*

The TRA originated in the field of social psychology. It was developed by Fishbein and Ajzen (1975), and identifies the links among the beliefs, attitudes, norms, intentions, and behaviors of individuals (Figure 1). According to the TRA, a person's behavior is determined by his or her behavioral intention to perform it. This intention is itself determined by the person's attitude and his or her subjective norms concerning the behavior.

This theory can be summarized by the following equation:

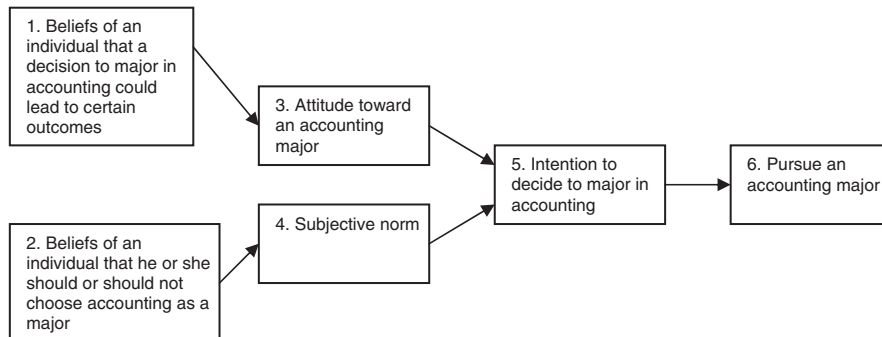
$$\text{Behavioral intention} = \text{Attitude} + \text{Subjective norms}$$

This model provides a social psychological framework that has proven useful in explaining many types of behavior (Ajzen and Fishbein, 1980; Sheppard *et al.*, 1988; Sable *et al.*, 2006), and has been recommended as a useful framework for examining the variables affecting career choice, ethical decisions, or consumer behavior (Sheppard *et al.*, 1988; Cohen and Hanno, 1993). The TRA characterizes human behavior as rational. Thus, it predicts that a student's intentions to choose a major will be strongly related to his or her attitude and subjective norms concerning that major. The TRA model of a student's decision to major in accounting is shown in Figure 2.



**Figure 1.**  
Theory of reasoned  
action model

Source: Fishbein and Ajzen (1975)



**Figure 2.**  
TRA model of a student's  
decision to major  
in accounting

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### 2.2 Intrinsic interest (the TRA model)

Research demonstrates that intrinsic factors are very important in career decisions made by accounting students (Linden, 1987; Adams *et al.*, 1994; Felton *et al.*, 1994). Intrinsic factors are associated with the attitude, beliefs, interests, or satisfaction obtained from pursuing something, such as creative, interesting, or intellectually challenging work. Adams *et al.* (1994) found that a major influence on undergraduate selection of an accounting major was a genuine interest in the field. Intrinsic interest has also been shown to be an important aspect in the quality of student learning (Entwistle and Ramsden, 1983; Jackling and Calero, 2006). For example, Entwistle and Ramsden (1983) found that students with high intrinsic interest were able to recognize and solve problems at a more complex level, and overall developed a longer lasting knowledge of a subject. With reference to the TRA model, the following alternative hypothesis is proposed:

- H1.* Intrinsic interest is likely to influence students to choose an accounting major or minor rather than another major.

### 2.3 Parental influence (the TRA model)

Pearson and Dellman-Jenkins (1997) found that parental influence had an impact on a student's selection of a college major. In an early study, Silverstone and Williams (1979) found that 26 percent of female chartered accountants in England and Wales considered parental influence to be a factor in career choice. A US study (Allen, 2004) concluded that important referents such as parents influence the decision of students to major in accounting in university. Parental influence is mainly regarded as belonging to the subjective norm construct in the TRA model (Cohen and Hanno, 1993; Felton *et al.*, 1994). It is worth examining this variable in Asian countries, where Confucian culture is prominent, to determine whether students have perceptions different from those of their western counterparts and whether the decisions of the former will be significantly influenced by parental pressure, which is the norm in traditional Chinese family culture (Zhang and Zhang, 2006). Since no study of this nature has taken place in a region where parental influence is seen to be stronger due to the Confucian culture, therefore *H2* is proposed as follows:

- H2.* Parental influence is likely to influence students to choose an accounting major or minor rather than another major.

### 2.4 First year accounting course

Jackling (2002) found that over 50 percent of first year students who had studied a core accounting course in Australia had negative perceptions of the accounting profession. Jackling and Calero (2006) found that the higher the level of satisfaction with the course, the greater the likelihood that students would hold the intention to become an accountant. Studies in the USA indicate that the decision to select accounting as a major depends on performance in the first course (Saemann and Crooker, 1999; Geiger and Ogilby, 2000). Geiger and Ogilby (2000) found that there was significant variation in the change in student perception in the selection of accounting as a major after the course was completed. The largest perceptual change over the semester was the

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increased boredom of students with the course, which affected their decision about their major. Hence, the following alternative hypothesis is proposed:

- H3.* Poor performance in the first year accounting course is likely to deter students from choosing an accounting major or minor but not from choosing another major.

### 2.5 HSA

Mauldin *et al.* (2000) found that the content of an accounting course has some influence on a student's decision to major in accounting. The impact of HSA on students' choice of study major may be different from that of the first year accounting course. The course content, assessment method, and mode of delivery of lectures might be different. It is interesting to examine this factor on students' choice of study major in the Hong Kong context. Students who have studied HSA tend to form more positive judgments about the work of an accountant (Felton *et al.*, 1994; Byrne and Willis, 2005). Furthermore, it has been found that students who have studied HSA have a greater interest in pursuing a career in accounting and also have a more positive perception of the profession (Felton *et al.*, 1994; Jackling, 2001; Jackling and Calero, 2006). Therefore, hypothesis *H4* is proposed as follows:

- H4.* Exposure to HSA is likely to influence students to choose an accounting major or minor rather than another major.

### 2.6 Financial rewards

Previous studies have found extrinsic factors such as financial rewards and job market considerations to be important factors in career choice decisions (Felton *et al.*, 1994; Ahmed *et al.*, 1997). Haswell and Holmes (1988) and Horowitz and Riley (1990) found that salary was among the top three criteria influencing the career decision of accountancy candidates. Moreover, Ahmed *et al.* (1997) found that financial factors had the highest explanatory power for the decision whether or not to choose a career as a CPA. Besides, prior studies have found the financial rewards variable has an influence on the decision to major in accounting at university (Tan and Laswad, 2006; Saemann and Crooker, 1999). Therefore, *H5* is proposed as follows:

- H5.* Financial rewards are likely to influence students to choose an accounting major or minor rather than another major.

### 2.7 Gender

In research conducted in the USA, Nelson and Vendryzk (1996) found that female students demonstrated a more favorable attitude toward accounting than their male counterparts. Indeed, the proportion of females represented in accounting courses has increased substantially over recent decades (Jackling and Calero, 2006). There is an increasing number of females entering the public accounting profession in Hong Kong (ACCA Hong Kong, 2007; HKICPA, 2007), and research into gender has implications for the success of socialization processes and practice development of accounting firms (Giacomino and Akers, 1998; Iyer *et al.*, 2005). In Hong Kong, there are more female than male accounting graduates working for Big 4 accounting firms (ACCA Hong Kong, 2007; HKICPA, 2007). However, no research has been conducted into the effect of gender in the Hong Kong accounting profession. Hence, *H6* is proposed as follows:

- H6.* Females are more likely than males to choose an accounting major or minor.

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### 3. Methodology

#### 3.1 Stage 1 – qualitative analysis

In the qualitative stage, 21st year accounting students from four universities in Hong Kong were interviewed. These students were randomly selected from the enrolment lists of the courses. The interviews were conducted at the beginning of the second semester, after students had finished their first accounting course. Each interview lasted for 30 minutes. Most of the questions were open ended to allow the interviewees to choose how to respond and to use their own terms (Hoque and Hopper, 1994; Frezatti *et al.*, 2007). Notes were taken during the interviews, and a document summary form was used to summarize the content of the interviews for the questionnaire construction. Nineteen interviewees identified two important factors that had influenced their decision to major in accounting: intrinsic interest and parental influence.

Confucianism is a Chinese ethical and philosophical system developed from the teachings of the Chinese philosopher Confucius (551-479 BC). It focusses on human morality and right action and is a complex system of moral, social, political, philosophical, and quasi-religious thought that has had tremendous influence on the culture and history of China. Most students commented that they decided to major in accounting because their parents wanted them to do so, which reveals the influence of Confucian culture, which grounds Chinese societies. The results were consistent with specific Confucian cultural characteristics. Therefore, it is beneficial to conduct a study in Hong Kong that has a mixed culture from China and Britain. Hence, the main variables identified from the interviews were captured in the questionnaire for the survey stage.

#### 3.2 Stage 2 – survey method

Pre-tests were first conducted on the pilot questionnaires and were found to be satisfactory, thus the ambiguity of the questions was not a concern in this study (Cavana *et al.*, 2001). Questionnaires were then distributed to and completed by 422 first year students, who were in introductory-level compulsory business courses offered by the Faculty of Business of four Hong Kong large campus universities, during the regular class meeting time. They were business students, and included those with accounting as a major and those with other majors. The survey was administered in the second semester, after the students had completed their first course in accounting. The instructions stated that the questionnaire was designed to collect information on factors affecting their decision to major in accounting. The average completion time was around 20 minutes. The completed questionnaires were collected in the class and the response rate was 90 percent. The anonymity of respondents was maintained in the survey. Similar approaches were conducted on 60 master's students in four universities. The response rate was 95 percent. Data from master's students are captured as the level 2 data in HGLM model.

The questionnaire comprised two major sections. The first section concerned the six main independent variables influencing the decision of the student to major in accounting. The dependent variable included three categories of choice of major. The dependent variable is MAJOR CHOICE: 0 represents "accounting minor," 1 represents "accounting major," and 2 represents "other major." The six independent variables are: first accounting course (FIRACCOU): 0 represents "no," 1 represents "yes"; HSA: 0 represents "did not study HSA," 1 represents "studied HSA"; intrinsic interest (INTRINSIC): was measured by the five-item scale with a Likert scale ranging from

1 (not important) to 5 (very important). The items were averaged to create a single measure of the construct (Cronbach's  $\alpha = 0.90$ ). Similar approaches apply to "parental influence" (PARENTAL): rated on a Likert-type scale from 1 (not important) to 5 (very important) (Cronbach's  $\alpha = 0.92$ ); and for "financial rewards" (FINANREW): rated on a Likert-type scale from 1 (not important) to 5 (very important) (Cronbach's  $\alpha = 0.89$ ); gender (GENDER): 0 and 1 represent female and male, respectively. The second section inquired into the demographic information of the student.

## 4. Results

### 4.1 Data analysis – level 1 data

As the dependent variable was a non-metric variable (consisted of three categories of choice of major), multinomial logistic regression was used to analyze the relationships among the dependent and independent variables. In our study, the multiple groups were comprised of accounting students who chose accounting as a minor, accounting as a major, or another major.

The logistic regression function, although itself non-linear, contains a term,  $Z$ , which is a linear combination for the independent variables. In this study,  $Z$  was as follows:

$$\text{CHOICE}(Z) = b_0 + b_1\text{FIRACCOU} + b_2\text{HSACCT} + b_3\text{INTRINSIC} + b_4\text{PARENTAL} + b_5\text{FINANREW} + b_6\text{GENDER} \quad (1)$$

The explanatory variables in the logit equation are as follows: CHOICE is the major choice of the student; where 0 = accounting minor, 1 = accounting major, and 2 = other major; FIRACCOU the first accounting course; HSACCT the high school accounting; INTRINSIC the intrinsic interest; PARENTAL the parental influence; FINANREW the financial rewards; GENDER the male or female.

The logistic regression function is as follows:

$$P = \frac{\exp(z)}{1 + \exp(z)} \quad (2)$$

where  $P$  is the probability of choosing accounting major or minor, and  $Z$  is the function defined in (1). The value under the odds ratio in Table V is the predicted change in odds for a unit increase in one independent variable, holding other variables constant. The descriptive statistics are shown in Table I.

Multinomial logistic regression does not make any assumptions of normality, linearity, or homogeneity of variance for the independent variables. However,

	<i>N</i>	Range	Minimum	Maximum	Mean	SD
Intrinsic factors	422	4.00	1.00	5.00	3.8957	1.32884
Financial reward	422	1.00	1.00	5.00	2.3440	1.27648
High school accounting	422	1.00	0.00	1.00	0.4526	0.49834
Gender	422	1.00	0.00	1.00	0.5308	0.49964
First accounting course	422	1.00	0.00	1.00	0.2701	0.44456
Parental influence	422	4.00	1.00	5.00	3.5616	1.13453
Major choice	422	2.00	0.00	2.00	1.1185	0.80979

**Table I.**  
Descriptive statistics

multicollinearity can affect the parameters of the regression model; hence, it is essential in multinomial logistic regression to test for such a problem. Field (2005) stated that a tolerance value of  $<0.1$  and variance inflation factor (VIF) value  $>10$  are causes for concern. Table II shows that the tolerance values for all of the predictor variables were  $>0.1$  and all of the VIF values were less than the criterion of 10. Hence, it can be concluded there was no problem with collinearity among the variables.

4.2 Overall test of the relationships in the model

The significance test for the final model chi-square, which was 387 ( $p$ -value  $<0.05$ ) (Table II), is statistical evidence of the presence of a relationship between the dependent variable (major choice) and the combination of the independent variables. Approximation of the OLS regression  $R^2$  and pseudo- $R^2$  (Nagelkerke  $R^2$ ) values indicated that the model accounted for 68 percent of the variance in the dependent variable (Menard, 2002). That high percentage indicates that the independent variables were good predictors for the logistic regression model, and reveals that the relationship was very strong. The classification table (Table III) shows how well the model predicted group membership and evaluates the accuracy of the model. The current model correctly classifies 52 accounting minor students out of 116 accounting minor students (i.e. it correctly classifies 44.8 percent of cases). For accounting major students, the model correctly classifies 112 accounting major students out of 140 accounting major students (i.e. it correctly classifies 80 percent of cases). For other majors' students, the model correctly classifies 150 other majors' students out of 166 other majors' students (i.e. it correctly classifies 90.4 percent of cases). The overall accuracy of classification in this model is the weighted average of these three values. Therefore, the model shows that 74.4 percent of cases are correctly classified and that the model makes accurate predictions using the six independent variables (Miles and Shevlin, 2001; Menard, 2002).

Model	Collinearity statistics		Model fit information		
	Tolerance	VIF	-2 log likelihood	$\chi^2$	Significance
Intercept only			694.676		
Final model			307.846	386.830	0.000
First accounting course	0.955	1.047			
High school accounting	0.269	3.722			
Intrinsic interest	0.832	1.201			
Parental influence	0.760	1.316			
Financial rewards	0.270	3.709			
Gender	0.883	1.132			

**Table II.**  
Collinearity statistics and model fit information

Observed	Predicted			Percent correct
	Accounting minor	Accounting major	Other major	
Accounting minor	52	29	35	44.8
Accounting major	19	112	9	80.0
Other major	8	8	150	90.4
Overall percentage	18.7	35.3	46.0	74.4

**Table III.**  
Classification table



4.3 Level 1 data-multinomial logistic regression results

The findings of the questionnaire survey confirmed those of the semi-structured interviews. The likelihood ratio tests (Table IV) revealed that intrinsic interest, parental influence, and gender were all significant at the 0.05 level, indicating that they contributed significantly to explaining differences in major choice. First accounting course, HSA, and financial rewards were not significant at the 0.05 level.

Multinomial logistic regression was used to make comparisons among the groups defined by the dependent variable in Table V. Intrinsic interest was statistically significant ( $p < 0.05$ ) (Table V). It was significant in distinguishing both the accounting minor and the accounting major group from the reference category, the other major group. The positive odds ratio indicated that a higher intrinsic interest score increased the likelihood that the student would choose accounting as a minor rather than another major, and increased the likelihood that the student would choose accounting as a major rather than another major. Hence, *HI* was supported.

Parental influence was statistically significant ( $p < 0.05$ ) (Table V). It too was significant in distinguishing both the accounting minor and the accounting major group from the other major group. The positive odds ratio indicated that a higher parental influence score increased the likelihood that the student would choose an

**Table IV.**  
Multinomial logistic regression – likelihood ratio tests

Effect	-2 log likelihood of reduced model	$\chi^2$	Significance
Intercept	421.668	113.822	0.000
FIRACCOU	308.934	1.088	0.580
HSACCT	308.212	0.366	0.833
INTRINSIC	358.804	50.958	0.000
PARENTAL	408.729	100.883	0.000
FINANREW	309.032	1.186	0.553
GENDER	423.962	116.116	0.000

**Table V.**  
Multinomial logistic regression

Major choice <sup>a</sup>	<i>B</i>	Std. Error	Wald	Significance	Odds ratio
<i>Accounting minor</i>					
Intercept	-1.899	0.699	7.382	0.007	
FIRACCOU	-0.327	0.386	0.717	0.397	0.721
HSACCT	0.061	0.617	0.010	0.921	1.063
INTRINSIC	0.593	0.139	18.346	0.000	1.810
PARENTAL	0.463	0.175	7.016	0.008	1.589
FINANREW	0.408	0.620	0.434	0.510	1.504
GENDER	-3.314	0.396	69.921	0.000	0.036
<i>Accounting major</i>					
Intercept	-10.421	1.397	55.620	0.000	
FIRACCOU	-0.043	0.462	0.009	0.925	0.958
HSACCT	0.362	0.707	0.262	0.609	1.436
INTRINSIC	1.462	0.263	31.022	0.000	4.315
PARENTAL	1.682	0.214	61.725	0.000	5.377
FINANREW	-0.148	0.714	0.043	0.836	0.862
GENDER	-3.418	0.472	52.338	0.000	0.033

**Note:** <sup>a</sup>The reference category is “other major”

accounting minor or accounting major rather than another major. Therefore,  $H2$  was supported. However, first accounting course, HSA and financial rewards were not significant at the 0.05 level, implying that they did not contribute significantly to explaining differences in major choice. Hence,  $H3$ ,  $H4$ , and  $H5$  were not supported.

Gender had a significant influence in distinguishing both the accounting minor and the accounting major group from the other major group. The negative odds ratio indicated that a student being male decreased the likelihood that the student would choose an accounting minor or accounting major rather than another major. Thus,  $H6$  was supported.

#### 4.4 Level 2 data – HGLM results

Since the dependent variable has multinomial outcomes, i.e. (0, 1, and 2), HGLM is used for level 2 model. The levels 1 and 2 model in HGLM is represented by the following equations.

Level 1 model:

$$\begin{aligned}\text{Prob}[Y(0) = 1|B] &= P(0) \\ \text{Prob}[Y(1) = 1|B] &= P(1) \\ \text{Prob}[Y(2) = 1|B] &= P(2) = 1 - P(0) - P(1)\end{aligned}$$

where 0 = accounting minor, 1 = accounting major, 2 = other major.

$$\begin{aligned}\log[P(0)/P(2)] &= B0(0) + B1(0)(\text{INTRINF A}) + B2(0)(\text{FINANREW}) \\ &\quad + B3(0)(\text{HSACCT}) + B4(0)(\text{GENDER}) \\ &\quad + B5(0)(\text{FIRACCOU}) + B6(0)(\text{PARENTAL})\end{aligned}$$

$$\begin{aligned}\log[P(1)/P(2)] &= B0(1) + B1(1)(\text{INTRINF A}) + B2(1)(\text{FINANREW}) \\ &\quad + B3(1)(\text{HSACCT}) + B4(1)(\text{GENDER}) \\ &\quad + B5(1)(\text{FIRACCOU}) + B6(1)(\text{PARENTAL})\end{aligned}$$

Level 2 model:

$$\begin{aligned}B0(0) &= G00(0) + G01(0)(\text{INTRINF A}) \\ &\quad + G02(0)(\text{PARENTAL}) \\ &\quad + G03(0)(\text{GENDER}) + U0(0)\end{aligned}$$

$$\begin{aligned}B0(1) &= G00(1) + G01(1)(\text{INTRINF A}) \\ &\quad + G02(1)(\text{PARENTAL}) \\ &\quad + G03(1)(\text{GENDER}) + U0(1)\end{aligned}$$

The level 2 model includes variables of “intrinsic factor” and “parental influence” from the TRA model, and the “gender” variable in the level 2 equation.  $G$  is a second level

variable in HGLM model and  $G00(0)$ - $G00(1)$  is the second level intercept term, whereas  $G01(0)$ - $G03(1)$  is the slope relating to the second level variables. Finally,  $U0$  is the level 2 residual. The following table (Table VI) displays the results for HGLM.

HGLM in HLM (Table VI) indicates that “intrinsic interest” and “parental influence” from the TRA model, have  $T$ -ratios of 1.216 and 1.547, respectively, both with  $p$ -values  $< 0.05$  for the category “0” in HGLM model. Besides, HGLM also indicates that “intrinsic interest” and “parental influence” from the TRA model, have  $T$ -ratios of 1.976 and 2.581, respectively, both with  $p$ -values  $< 0.05$  for the category “1” in HGLM model. The results indicate “intrinsic interest” (attitude toward the behavior) and “parental influence” (subjective norm) in the HGLM make significant contributions to predicting a student’s decision to major in accounting for the level 2 model (master’s students). The results for the level 2 data in HGLM confirm the level 1 model. Hence  $H1$  and  $H2$  are supported and the results support the TRA model. Finally “gender” variable is also significant in HGLM, and hence  $H6$  is supported.

## 5. Discussion

### 5.1 Implications

The two constructs in the model, intrinsic interest and parental influence, make significant contributions to predicting the decision to major or minor in accounting. Parental influence has the highest explanatory power in differentiating among the three student groups in the multinomial logistic regressions and HGLM. Though parental influence is also found to be an important factor in western countries, this

Fixed effect	Coefficient	$T$ -ratio	$p$ -value
<i>For category 0, accounting minor</i>			
For INTRCPT1, $B0(0)$			
INTRCPT2, $G00(0)$	0.225	0.358	0.722
INTRINFA, $G01(0)$	1.110	1.216	0.000
PARENTAL, $G02(0)$	1.798	1.547	0.000
GENDER, $G03(0)$	-0.171	-0.127	0.021
For INTRINFA slope, $B1(0)$	1.008	1.069	0.005
For FINANREW slope, $B2(0)$	0.830	2.296	0.222
For HSACCT slope, $B3(0)$	-0.165	-0.432	0.665
For GENDER slope, $B4(0)$	-1.150	-1.515	0.000
For FIRACCOU slope, $B5(0)$	-0.296	-0.904	0.367
For PARENTAL slope, $B6(0)$	1.222	1.444	0.008
<i>For category 1, accounting major</i>			
For INTRCPT1, $B0(1)$			
INTRCPT2, $G00(1)$	0.523	0.880	0.383
INTRINFA, $G01(1)$	1.635	1.976	0.004
PARENTAL, $G02(1)$	2.326	2.581	0.000
GENDER, $G03(1)$	-2.752	-1.992	0.013
For INTRINFA slope, $B1(1)$	1.467	1.506	0.015
For FINANREW slope, $B2(1)$	0.509	1.181	0.239
For HSACCT slope, $B3(1)$	0.527	1.253	0.211
For GENDER slope, $B4(1)$	-3.872	-2.280	0.000
For FIRACCOU slope, $B5(1)$	-0.112	-0.306	0.760
For PARENTAL slope, $B6(1)$	1.584	1.756	0.012

**Table VI.** Hierarchical generalized linear modeling (HGLM) – results for level 2 model

**Note:** The outcome variable is MAJOR CHOICE

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result is consistent with prior studies (Auyeung and Sands, 1997; Tan and Laswad, 2006), indicating that Asian students tend to place more value on the opinion of their parents in their major intentions. Further research is recommended in other Asian countries to validate the results of this study.

Intrinsic interest is the second most important factor. The results for *H1* support the finding of prior research that intrinsic factors have a significant influence on the decision to major in accounting (Cohen and Hanno, 1993). Genuine interest in the subject appears to be an important factor that positively influences the decision of students to major or minor in accounting. Their attitude or belief toward studying an interesting major motivates them to choose accounting. This result reflects the influence of Confucian culture, which grounds Chinese societies, and which promulgates filial duty. Besides, prior research (Entwistle and Ramsden, 1983) indicates that students who have a high level of interest in a subject area tend to use superior learning strategies and develop a longer lasting knowledge of the subject. The accounting profession would benefit if students intrinsically interested in the subject graduated in accounting and entered the profession.

However, first accounting course and HSA do not affect the decision to major or minor in accounting, and these results counter those of studies conducted prior to the Enron scandal (Felton *et al.*, 1994; Saemann and Crooker, 1999; Geiger and Ogilby, 2000). The semi-structured interviews also revealed similar findings. Further research in other Asian countries is suggested for comparative analysis. Furthermore, financial rewards did not influence the decision of students to major or minor in accounting. This finding counters that of studies conducted prior to the Enron scandal (Cohen and Hanno, 1993; Felton *et al.*, 1994; Ahmed *et al.*, 1997). A survey by Robert Half International, recruitment specialists, found that 86 percent of the respondent companies reported difficulty in finding accounting professionals with the right skills and expertise in the area concerned (SCMP, 2008b). Though the market was willing to offer high salary packages to the right accounting professionals, it is promising to note that students did not report financial rewards as an important criterion in their decision to major or minor in accounting.

Finally, gender is found to be an influencing factor. Females are more likely than males to decide to major or minor in accounting. The results are interesting. There may be other issues that are contributing to the changing demographics. Although the accounting profession has no control over demographic conditions, the image of the profession could be improved by hosting more promotional seminars, workshops, and career fairs to attract more students to study accounting. University staff could conduct more school briefings at colleges to encourage more students to decide to major or minor in accounting at university.

To conclude, this study uses a TRA model to predict and explain the decision to major or minor in accounting. The results of this study have several contributions. First, this study is conducted in Hong Kong, which has a mixed culture from Britain and China. The research extends the effect of culture on students' choice of study major in this Hong Kong study. Second, the results contribute to the Asia Pacific literature in that the findings are consistent with the TRA model, and extend the application of the TRA model to the accounting profession. Third, the findings provide insights for employers to better understand the mindsets of potential accounting graduates. Employers could then provide more on-the-job training to new recruits so as to retain them in the profession. Finally, universities and the HKICPA could conduct more promotions so as to attract more bright students to choose accounting as their study major.

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### 5.2 Limitations and future research

However, the results of the study should be interpreted in the light of some limitations. The subjects are from only four universities in Hong Kong. Future research could cover more institutions to improve the validity of the results. Second, future research could include other Asian countries or other parts of China such as Macau to examine the impact of Confucian culture on the decision of students to major in accounting.

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#### Further reading

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