

What explains student's intentions to pursue a certified professional accountancy qualification?

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Abstract

Purpose – This study examines the factors that explain Ghanaian business students' intentions to pursue a Certified Professional Accounting (CPA) qualification.

Design/methodology/approach – The study uses survey method of research and mainly used questionnaires as data collection instrument to elicit information from the respondent group. Using a total of 641 business students from the University of Ghana Business School, a mixture of factor analysis and logistic regression analysis techniques was used in investigating the study objectives.

Findings – Results from the regression analysis demonstrate that students' preference and beliefs about accounting professional qualification, academic major and grade point average are significantly associated with their intentions to pursue a CPA qualification. Moreover, majority of the sampled respondents (47.9 per cent) with the desire to pursue a CPA qualification prefer to be affiliated with the Association of Chartered Certified Accountants, 27.2 per cent prefer the Institute of Chartered Accountant Ghana qualification, while only 7 per cent of the students prefer to be affiliated with the Chartered Institute of Management Accountant.

Research limitations/implications – The findings from this study have important implications for the various professional accountancy bodies, accounting educators and other stakeholders interested in promoting the choice of accounting as a career path among university students.

Practical implications – The results indicate that, as part of the broader strategy to increase the number of professional accountants in Ghana, there is the need to promote the study of accounting at the undergraduate level in the various universities in the country.

Originality/value – This study uniquely uses the behavioral decision theory to explain the dominant factors associated with students' intentions to pursue a CPA qualification.

Keywords Ghana, Logistic regression, Behavioral decision theory, Certified professional accountants, Students' intentions

Paper type Research paper



Introduction

Every economy requires the expertise of chartered accountants to help maintain a vibrant accounting system, which is recognized as an important component of a country's institutional infrastructure. The demand for accountants is expected to increase because of the increased number of businesses, changing financial laws, increased corporate governance regulations and increased accountability for protecting an organization's stakeholders (Coe, 2016). Owing to the key role that accountants play in the development effort of a country, concerns have been raised over the shortages of certified professional accountants in many parts of the world.

In the USA, for instance, the [Global Upside \(2014, p. 1\)](#) report asserts that "there is a shortage of young people choosing to study accounting in college, while after college, there are not enough graduates choosing a career in accounting, or succeeding when they join the workforce". This situation is not peculiar to the USA, as [Chen \(2012\)](#) also reports of severe shortages of qualified accountants in China. Similarly, [Nor et al. \(2013\)](#) indicate that whilst the demand for accountants in Malaysia is expected to rise to 80,000 by 2020, it is doubtful in terms of the capacity of the country to match up with supply which is currently below 30,000. Notwithstanding the fact that recent studies suggest record levels of increased enrollment into accounting programs in various institutions (academic and professional) and increased hiring of public accountants, the gap between the number of students graduating with accounting degrees and number of candidates sitting for Certified Professional Accountant (CPA) exams continues to widen over the years ([AICPA, 2015](#); [Vien, 2015](#)). Thus, despite the improvements in enrollments into accounting programs over the past few years, the corporate world is still in dire need of accountants.

In Africa, a survey by the International Federation of Accountants' (IFAC) in 2007 classifies the continent as one of the most challenged in terms of meeting the demand for accounting professionals. The survey report indicates that most countries in Africa are confronted with significant challenges with staffing of accountants to varying degrees. [Van Zyl and de Villiers \(2011\)](#) indicate that within South Africa, the demand for qualified accountants for the country's financial management and auditing sector, far outstripped the supply (in excess of 22,030). Also, while the demand for professional accountants in Botswana was estimated to be 3,000 as at the end of 2009, the number of professional accountants available could only meet 20 per cent of the demand with 67 per cent of this number being expatriates ([Mbekomize, 2015](#)).

In Ghana, the report on Observance of Standards and Codes, Accounting and Auditing ([ROSC, 2014](#)) indicates that although the number of chartered accountants increased between the year 2004 and 2014, by approximately 254 per cent (from 1,089 in 2004 to 3,851 in 2014), the number still falls short of the estimated demand of about 8,000 chartered accountants. Thus, in spite of the huge growth in the supply of qualified accountants in the country, the demand for accountants in the various sectors of the Ghanaian economy far exceeds the available supply. In an attempt to help meet the rising demand for qualified accountants in the country, the Institute of Chartered Accountants, Ghana (ICAG), among other initiatives, has established a center for teaching students and provides internet-based support services for students interested in pursuing a chartered accountant certification ([ROSC, 2014](#)). While not discounting the benefits of these initiatives, [Sugahara et al. \(2009\)](#) believe that gaining an understanding of the factors that shape students' career choices is likely to well position accountancy bodies in helping to reverse the current trend of global shortage in professional accountants.

Empirically, a number of studies have examined various factors linked with students' choice of an accounting major and in particular, choice of accounting as a career path.

Sugahara *et al.* (2009) find intrinsic factors, career prospect, working environment and financial rewards as the dominant factors that explain student career choice. Tan and Laswad (2006) observe that, personal perception and perceived control factors influence career choice among accounting students, whereas Swain and Olsen (2011) associate personal interest and independence with students' career choice. Wen *et al.* (2015) identify genuine interest, perceived professional independence, perceived difficulties in maintaining certification as the dominant factors that influence career choice among accounting students. This study builds on this area of research by assessing the factors that are associated with Ghanaian undergraduate business students' intention to pursue a CPA qualification. Specifically, this study ascertains whether students' intentions to pursue a CPA qualification are in any way associated with their beliefs, preferences and resource constraints.

The empirical analysis of this study is important for several reasons. First, unlike many past studies that rely predominantly on trait and factor theory (Carpenter and Strawser, 1970; Gul *et al.*, 1992; Paolillo and Estes, 1982), theory of reasoned action (Felton *et al.*, 1994; Hermanson *et al.*, 1995) and theory of planned behavior (Allen, 2004; Tan and Laswad, 2006), this study uses behavioral decision theory (BDT) to explain the dominant factors associated with students' decision to pursue a CPA qualification. Proponents of BDT argue that the behavior of an individual could be better understood by assessing the beliefs, preferences and constraints that defines that individual (Gintis, 2007).

Second, despite the fact that extensive research on the factors that explain students' decisions to pursue an accounting major or professional accounting qualification has been undertaken, the evidence has mostly been limited to the developed world with little attention to Africa. As indicated in the 2007 survey by IFAC, many countries from Africa are among the worst affected in terms of global shortage of accounting professionals. Studies that focus on Africa are therefore relevant in identifying the root causes of shortages in professional accountants from the African perspective.

Third, studies that investigate students' intentions to pursue an accounting professional qualification mostly focused on professional qualifications organized by the respective local professional body, as well as a professional qualification that relate only to financial reporting (Jackling and Calero, 2006; Felton *et al.*, 1994; Wen *et al.*, 2015). These studies effectively do not consider students who have interest to pursue other accounting professional qualifications organized by recognized international professional bodies and/or qualifications relating to other specializations in accounting such as management accounting, taxation and auditing. The present study extends this line of research by considering all professional accounting qualifications and also explores some of the reasons for students' preference for a particular accounting professional qualification.

The findings from this study indicate that generally, students' beliefs, preferences, academic major and grade point average (GPA) are significantly associated with their intention to pursue a CPA qualification in Ghana while "Constraint[1]" is negatively associated with students' intention to pursue a CPA qualification though not statistically significant. The remaining sections of the paper are organized as follows: the next section provides some brief background on professional accountancy education in Ghana. This is followed by the literature review and the section explaining the methodology of the study. The section after discusses data analysis and findings with the final section presenting the summary and conclusions of the study.

Professional accounting education in Ghana

In Ghana, ICAG (established in 1963) is the local accounting body responsible for managing the accounting profession, conducting qualifying examination for professional accountants and issuing licenses to accounting firms for public practice since its establishment in 1963. To be recognized as a chartered (professional) accountant in Ghana, an individual must pass the ICAG exams and other qualification requirements or obtain an equivalent foreign qualification from recognized bodies. At the tertiary level, most universities and polytechnics offer accounting programs leading to the award of a bachelor's degree, a master's degree or a diploma in accounting upon completion. However, holders of these certificates must pass the qualifying exams of ICAG or its acceptable foreign equivalent and obtain some minimum working experience in accounting practice approved by the Council of the Institute to become chartered (professional) accountants. Although prospective students who hold a first degree or diploma in accounting are exempted from the first level examinations; they do not constitute a pre-requisite in applying for a professional accounting qualification (ICAG, 2016). The basic educational requirement to become a student of ICAG is a pass in a high school certificate examination (known in Ghana as the West Africa Senior Secondary Certificate Examination). A student who successfully completes the professional examinations automatically becomes a member of ICAG, and subsequently, a chartered (professional) accountant after obtaining at least three years working experience in accounting approved by the council[2]. Thus, within the Ghanaian context, becoming a professional accountant does not usually depend on an individual's prior accountancy training at the tertiary level. Moreover, a degree in accounting-related program does not make you a professional accountant unless you fulfill all the requirements of ICAG. Professional accounting training by ICAG and accounting education offered by other institutions exist as dichotomous entities. Currently, there is still no tertiary institution accredited to have its accounting qualification equivalent to the ICAG qualification. There is, therefore, the lack of commonality across institutions that engage in accounting education in Ghana (ROSC, 2004).

Literature review

Literature has examined the various factors that explain students' career choice in various professions by using several theories, notably, the trait and factor theory (TFT), the theory of reasoned action (TRA) and the theory of planned behavior earlier (TPB). These studies identify the relative importance of certain vocational factors and psychological traits and factors of accounting graduates in making their career decisions (Porter and Woolley, 2014).

TFT suggests that an individuals' career choice depends on the maximum satisfaction that individual hopes to gain from his/her career (Ginzberg *et al.*, 1951). Thus, a person will pursue a particular career if the individual believes that such career will enable him/her use his/her interests and capacity to gain most of his/her values and purposes as possible.

TRA predicts that a person's attitude toward a behavior and the perceptions of social norms influence his/her behavior and thus both personal and social influences[3] determine an individual's intention to pursue a particular action (Jackling and Keneley, 2009; Porter and Woolley, 2014). TRA further explains that the beliefs – behavioral and normative beliefs[4] – of the outcome of a particular behavior, shape and develop the individual's attitude and social norms toward that behavior (Jackling and Keneley, 2009).

TPB, on the other hand, enhances TRA to include perceived control as an additional factor that influences behavior. Porter and Woolley (2014) explain that the perceived behavioral control is the “self-perceived ability of an individual to perform the behavior”

(p.4). This means that an individual will participate in an action based on his/her apparent interest and capabilities in performing that action.

Generally, studies that have applied these theories to advance knowledge on students' decision to pursue an accounting major or career in accounting argue that students' perception toward the benefits of an accounting career and their perceived social norms in support of an accounting career influence their decision to major in accounting. Moreover, students who believe they have the means and the ability to undertake successfully an accounting major and accountancy career are likely to do so.

Factors that affect students' intention to pursue a career in accounting

Prior studies have found that the attitude toward an outcome of an accounting career affects students' choice of majoring in accounting. Specifically, accounting literature identifies job satisfaction, intellectually challenging job, opportunity for advancement, financial remuneration and earnings potential, social status, job security and job prospects as the behavioral belief factors that influence students' choices to major in accounting (Ahmed *et al.*, 1997; Felton *et al.*, 1994; Hermanson *et al.*, 1995; Paolillo and Estes, 1982; Tan and Laswad, 2005; Felton *et al.*, 1996). Felton *et al.* (1996) examined the relationship between attitudes and intentions to become an accountant and found that for the evaluation of the importance of outcomes such as long-term earnings, advancement opportunities are very essential in explaining differences in students' choice of a career in accounting or non-accounting profession. Ahmed *et al.* (1997) also found that students majoring in accounting attach lower importance to intrinsic factors, such as job satisfaction, the opportunity to be creative and intellectual challenge associated with the accounting curriculum. Jackling and Keneley (2009) found that accounting majors in Australia perceive that market-related and extrinsic factors such as good job opportunities and potential high salary positively influence the choice to major in the profession.

Other studies indicate that accounting students recognize greater positive social norms toward majoring in accounting than non-accounting students (Cohen and Hanno, 1993; Tan and Laswad, 2006), and parental influence is considered as the most important subjective norm that influence students' decisions to pursue accounting (Allen, 2004; Felton *et al.*, 1994). In a survey of sampled business students in an introductory accounting course in a New Zealand University, Tan and Laswad (2006) find that referent group determines students' intention to major in accounting or other business disciplines. Further, they demonstrate that among the influential referents, parents, in particular, seem to have a greater influence on the intentions of students to pursue the accounting profession. Allen (2004) also concludes on the importance of social relations such as parents supporting the students' decision to major in accounting in the university. Again, Dandy and Nettelbeck (2002) suggest that the educational background of parents influences students' selection of which subject area to specialize in higher education, including accounting. Other social norms identified in literature include influence of other referent groups such as teachers, friends or peers (Auyeung and Sands, 1997) and governments (Birrell, 2006).

Moreover, prior research shows that a student's perception of his/her abilities to do and be successful in studying accounting is an important predictor in choosing to major in accounting (Ahmed *et al.*, 1997; Auyeung and Sands, 1997; Felton *et al.*, 1994; Wen *et al.*, 2015). Wen *et al.* (2015) analyze the factors that influence Chinese college accounting students' intention to pursue the Chinese-certified public accountant profession. Surveying 288 students, they found that genuine interest, perceived professional independence in the workplace and perceived difficulties in maintaining the certification are the factors that

influences students' intentions to pursue the CPA. Further, their findings also indicate that expectations of market opportunities and the influence of key referent group impact on students' decisions to pursue the CPA qualification. [Allen \(2004\)](#) investigates the factors that limit students' interest in an accounting major and concludes that the perceived unappealing nature (image) of accounting and the number of years required to qualify and enter the profession influence students' decisions to pursue the accounting profession.

The preceding discourse suggests that the factors that influence an individuals' decision to pursue an accounting profession are predominantly intrinsic in nature, with little explanation on possible extrinsic factors. This may be because perceived intrinsic factors appear to underpin TRA and TPB ([Sugahara et al., 2009](#)). Nonetheless, because professional accountants are usually characterized as boring and methodical ([Tan and Laswad, 2005](#)), it is expected that students who choose to major in accounting will be less influenced by intrinsic factors in making their career decisions, relative to non-accounting students.

Consistently, prior studies found that students who choose to pursue a career in accountancy as compared to non-accounting career students are usually more interested in extrinsic factors and less motivated with intrinsic factors ([Ahmed et al., 1997](#); [Felton et al., 1994](#); [Jackling and Keneley, 2009](#)). [Felton, et al \(1994\)](#) examined the job factors that graduating business students consider in deciding whether to go into the Chartered Accounting (CA) profession or non-accounting careers. They found that prospective CA students are more concerned with good long-term earnings and promising job market opportunities, while prospective non-accounting career students attach more importance to high initial earnings and the intrinsic rewards of a job. [Ahmed et al. \(1997\)](#) also found that students who intend to pursue a CA career place greater importance on financial and job-related factors but intrinsic factors had no significant influence on the decision on whether to select a CA career.

Although extensive studies exist to explain individual behavior and career choice decisions, [Werner \(2004\)](#) suggests that only 40 per cent of the variance in behavior could be explained using TRA and TBP. Identifying other factors in addition to belief factors, grounded on established theory, to explain students' career choice in accountancy will advance knowledge in the area and promote the accounting profession in the face of its recent unpopularity among business students. [Gintis \(2007\)](#) advances the use of "behavioral decision theory" (BDT) – a predominant theory used in the medical field to explain behavioral decision – by asserting that in addition to individual beliefs and preferences, certain constraints influence a rational actor in choosing an alternative. Considering that pursuing the accounting profession may involve some external constraints, this study seeks to extend determinants of accounting career decisions literature using BDT to identify what other extrinsic factors and constraints influence the decision to pursue a career in the accounting profession.

Behavioral decision theory

The medical field has predominantly used BDT in predicting the behavior of patients ([Gintis, 2007](#); [Verbeke and Viaene, 1999](#)). BDT prescribes that the beliefs of the individual, the preference structure and constraint factors that relate to a particular behavior under study affect the individuals' decision to engage in the behavior ([Gintis, 2007](#)). Beliefs of the individual refer to the products of social processes which are shared among individuals ([Gintis, 2007](#)). It captures the intrinsic variables that have implication for career choice. Preference structure focuses on the predispositions of individuals, which affects the decision-making process. [Gintis \(2007\)](#) asserts that the status of an individual is highly important for decision-making, as rational actors consider what they want. Constraint

factors are the external factors that act as inhibitors in undertaking a particular activity. The theory suggests that a rational person acts in response to beliefs, preference and constraints that pertain to the action to be undertaken.

Behavioral decision theory and accounting career choice

Applying BDT to an individuals' choice of pursuing a CPA qualification, this study holds that beliefs and preferences that influence a students' decision to pursue accounting are similar to factors expounded by prior literature using TRA and TBP. However, this study argues that if an individual has a positive attitude, positive social norms and superior capabilities toward a behavior, there could be certain external constraints that will prevent him/her to engage in that behavior. This study, thus, argues that resource constraints – time, cost (e.g. cost of study materials) associated with pursuing an accounting qualification – may influence the decision of an individual to pursue a CPA qualification.

In terms of time constraints, [Albrecht and Sack \(2000\)](#) indicate that the increased educational requirement for the number of hours for CPA exams in most US states discourages students from pursuing the accounting profession. Moreover, most jurisdictions require a specific number of work experiences, after completion of the professional exams before one may be able to practice as a chartered accountant. This prolongs the number of years required to pursue accountancy and may influence an individual's decision to engage in the profession. In light of this, [Wen et al. \(2015\)](#) suggest that the difficulty in completing an accounting professional qualification and the difficulty in maintaining membership with these professional bodies influence an individual's decision to engage in the accounting profession.

Also, the pursuit of a CPA qualification will definitely involve some level of financial investment on the part of the prospective individual. Depending on the financial position of the individual, the cost involved may affect a person's decision to pursue the CPA qualification. Within a developing economy context, where income levels of individuals are generally very low, resource constraints may likely affect an individual's decision to pursue a CPA qualification. This study, thus, extends previous empirical works on career choice by examining the influence of some external constraints – the period and cost involved in completing the accountancy qualification, the flexibility involved in becoming a member of the professional bodies, difficulty in maintaining membership and the perceived quality of the qualification process – on students' decision to pursue accountancy career. The belief, preference and constraint (BPC) model proposed is as shown in [Figure 1](#).

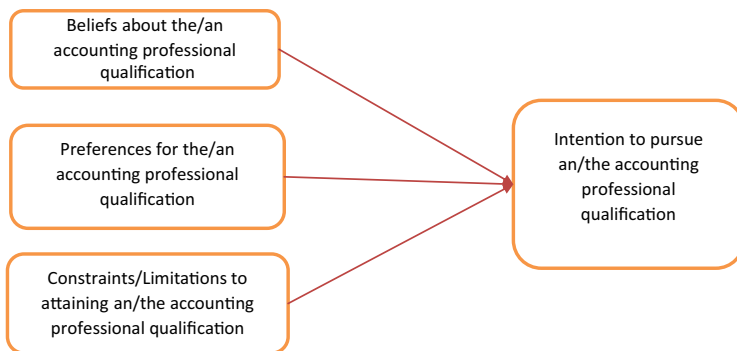


Figure 1.
Model of BPC

The study further focuses on students' intention to pursue professional accountancy as proxy for career choice in accounting. A critical examination of prior studies suggests a concentration of research on either college students' or university undergraduate students' decision to major in accounting. However, for a person to be able to practice as an accountant, it is usually required that he/she has a professional accountancy qualification from a professional body recognized by key regulators and educators of accountancy in that particular jurisdiction. In Ghana, Sections 270 (1) and 296 (1) of the Ghana Companies Act of 1963 provide that for a person to qualify as an auditor of a company (private or public), he/she must be a member of the ICAG. This professional accountancy qualification involves passing a set of exams and achieving competency/skill sets over a specified number of years. The prerequisites for commencing such qualification, typically, does not include any prior knowledge in accounting. Impliedly, pursuing a career path in accounting or becoming an accountant does not necessarily require a person to have a high school/university major in accounting, though useful. Studies that examine factors influencing accounting career choice using students' intention to pursuing professional qualification may provide better explanation relative to students just pursuing accounting as a major.

Methodology

Research design and instrument

The survey method of research was used and questionnaires were mainly used as the data collection instrument to elicit information from the respondent group. The questionnaire used closely corresponds to the instrument used in [Wen et al.'s \(2015\)](#) study. The survey instrument was categorized into two sections. The first part of the questionnaire contained information on the demographic characteristics of the respondents. These characteristics were in terms of the gender of the respondents, their level in the university, work experiences, GPA and their academic majors. Included in this section was a question to find out whether the respondents have intentions to pursue a professional accounting qualification, as well as the type of professional accounting body they intend to be affiliated with. Also, whether the respondents prefer to be affiliated with a particular professional body and their future plans after graduation.

The second part of the questionnaire looked at the factors that may influence students' intention to either pursue any professional accounting qualification or not. These indicators are based on the BPC model and hence contained items that related to the students' beliefs, preferences and constraints as far as attaining an accounting professional certification is concerned. These factors were examined on a seven-point Likert scale with 1 being strongly disagree and 7 being strongly agree. While it is common to find a five-point Likert scale in survey-based studies, a seven-point Likert scale was used to allow for more variability in responses. In all, five different constructs were examined in this section: capabilities, environmental factors, socio-cultural factors, preference and constraints. The indicators used to measure each of the constructs are shown in [Appendix](#). The final questionnaires were administered in the classrooms during the second week of the second semester for the 2015/2016 academic year.

The respondents

The target population for this study was all students in their tertiary level of education offering Business-related courses. The respondents were mainly students from the University of Ghana business school (UGBS). UGBS is the premier business school in Ghana and has been in existence for over half a century. The school provides training in a broad area of business courses including accounting, finance, marketing, operations management,

public and health services management and human resource management at both undergraduate and graduate levels. While it is reasonable for a study of this nature to focus mainly on accounting majors, we purposefully included the other disciplines as a good number of students from these disciplines also pursue professional accounting qualification for varied reasons. Moreover, including the other disciplines in the study affords the researchers the opportunity to examine whether differences exist between accounting and non-accounting students in terms of how the influential factors affect their professional career decisions. In all, a total number of 720 questionnaires were administered to the respondents during the second semester of the 2015/2016 academic year. All the questionnaires were duly returned as the administration was done and collected during a class session. Out of 720 questionnaires, 641 usable questionnaires were included in our analysis while the remaining 79 were excluded from the analysis because respondents failed to answer all the questions.

Indicator reliability, internal consistency reliability and validity tests

The measurement characteristics of the key constructs of the study (capabilities, environmental issues, socio-cultural issues, preferences and constraints) and their indicators were assessed to determine their suitability before including them in the regression model. The results of the indicator loadings as shown in Appendix indicate that the indicators/items were good measures of their respective construct, as their factor loadings exceeded the 0.4 minimum threshold (Hulland, 1999). The reliability of each construct was assessed by using the Cronbach's alpha and the Fornell and Larcker measure of composite reliability. As shown in Table I, the reliability scores for the various constructs were highly satisfactory, as they were well above the 0.70 recommended threshold (Nunnally, 1978). In addition to the reliability tests, convergent validity tests were conducted using the values of the average variance extracted (AVE) by the various constructs. The rule of thumb for a valid construct is to have at least 50 per cent of the total variance explained by the items within the construct (Hair et al., 2013). As seen in Table I, construct validity is assured, as all the constructs have AVE values greater than the 0.5 threshold. Discriminant validity of the constructs ensures that various items in each of the constructs measure that particular construct uniquely. The Fornell and Larcker criterion for discriminant validity asserts that the square root of the AVE score for each construct must be greater than the cross correlations of the latent variables or construct. Table II provides the results of the discriminant validity tests, and the results show that discriminant validity is assured, as the correlations among the various constructs are less than the square root of the AVE scores for the constructs.

Composite scores for the constructs

The various indicators for the respective construct were parceled to attain a composite score for each construct to be used as independent variables in the regression analysis. In

Table I.
Measures of
construct validity

Latent construct	AVE	Composite reliability	Cronbach's alpha
Capabilities	0.62	0.86	0.79
Constraints	0.65	0.88	0.82
Environmental issues	0.68	0.87	0.77
Preference	0.52	0.86	0.84
Socio Cultural issues	0.63	0.93	0.92

attaining a composite score for each of the construct, each of the indicators within a construct was weighted by their factor loadings. This was done to generate a single-measured variable for each of the construct to aid in further analysis. The loadings were used as weights because it is assumed that the indicators do not contribute equally to their respective construct. This approach according to [Hair et al. \(2006\)](#) is appropriate, as the composite score for each construct reflects the relative contributions of all indicators to the construct. Mindful of the potential risks of estimation bias and dimensionality of measurement issues, parceling is advantageous in increasing the efficiency of the proposed model and the reduction of random error ([Matsunaga, 2008](#)). The table in [Appendix](#) provides the various loadings of the indicators that were used as weights in the parceling process.

The ensuing section presents the proposed logistic regression model used to analyze the study objectives as depicted by the BPC model shown in [Figure 1](#).

The logistic regression model

To ascertain whether the independent variables were in any way associated with students' intention to pursue or not to pursue professional accounting qualification, the logistic regression procedure was used. Logistic regression is useful in predicting a dichotomous outcome from a set of explanatory variables. Specifically, the binary logistic regression was used, as our dependent variable was a dichotomous variable. The logistic regression is based on the probabilities associated with each value of the dependent variable. For the purpose of this study, the following is basic logistic regression formulation similar to that used in other related studies ([Jackling and Keneley, 2009](#); [Sugahara et al., 2009](#)):

$$\text{logit}(D_i) = \beta_1 \text{Capa}_i + \beta_2 \text{Env}_i + \beta_3 \text{Pref}_i + \beta_4 \text{Constr}_i + \beta_5 \text{Soc}_i + \beta_6 \text{AG}_i + \beta_7 \text{GEN}_i + \beta_8 \text{GPA}_i$$

where, D_i represents the dependent variable in our model measured as "1" if respondents have intention to pursue a professional accounting qualification and "0" otherwise. This is the variable of interest and represent the probability of a student pursuing a professional accounting qualification. The other independent variables are described as follows:

- Capa_i = Capabilities of respondent
- Env_i = Environmental factors
- Pref_i = Preferences of respondent
- Constr_i = Constraints faced by respondent
- Soc_i = Socio-cultural factors

Latent constructs	Capabilities	Constraints	Environmental issues	Preference	Socio-cultural issues
Capabilities	0.78				
Constraints	0.58	0.81			
Environmental issues	0.55	0.38	0.83		
Preference	0.31	0.33	0.18	0.72	
Socio-cultural issues	0.72	0.69	0.53	0.35	0.80

Table II.
Measures of
discriminant validity

The following were also included as control variables in line with existing related literature (Jackling and Keneley, 2009; Sugahara *et al.*, 2009; van Zyl and de Villiers, 2011):

AG_i = Accounting grouping (Measured as 1 if respondent is majoring in accounting and "0" if otherwise.)

GEN_i = Gender of respondent (Measured as "0" if respondent is female and "1" if respondent is male)

GPA_i = Grade point average of respondent

Results and discussion

Descriptive statistics of respondents

Table III presents the descriptive statistics of the respondents. The sample had a fairly even distribution of males and females although the females were of a higher proportion (52 per cent of respondents were females). Students were mainly in either their third or final years of their undergraduate studies. In addition, majority of the respondents were offering accounting (70.2 per cent) as their course major and this was followed distantly by the students studying finance and insurance (12.5 per cent). The remaining students came from the following majors: marketing, public administration and health services management

Level	Second year	Third year	Final Year			
Frequency	174	266	201			
Percentage	27.15%	41.50%	31.36%			
<i>Gender</i>	<i>Female</i>	<i>Male</i>				
Frequency	335	306				
Percentage	52.26%	47.74%				
<i>Work Experience</i>	<i>Yes</i>	<i>No</i>	<i>No Response</i>			
Frequency	270	357	14			
Percentage	42.12%	55.69%	2.18%			
<i>Academic Program</i>	<i>Accounting</i>	<i>Finance and Insurance</i>	<i>*PA & HSM</i>	<i>**HRM</i>	<i>Marketing</i>	
Frequency	450	104	31	22	34	
Percentage	70.20%	16.22%	4.84%	3.43%	5.30%	
<i>Current GPA</i>	<i>4.0-3.6</i>	<i>3.59-3.0</i>	<i>2.99-2.00</i>	<i>1.99-1.50</i>	<i>1.49-1.00</i>	<i>Non-Response</i>
Frequency	194	340	69	2	1	35
Percentage	30.27%	53.04%	10.76%	0.31%	0.16%	5.46%
<i>Intention to Take a professional exam</i>	<i>Yes</i>	<i>No</i>				
Frequency	536	105				
Percentage	83.62%	16.38%				
<i>***Preferred professional qualification</i>	<i>ICA</i>	<i>ACCA</i>	<i>CIMA</i>	<i>Non-response</i>		
	174	307	45	10		
	27.15%	47.89%	7.02%	1.56%		

Table III.
Characteristics of respondents

Notes: *PA and HSM: Public Administration and Health Services Management; **HRM: Human Resources Management; ***this was taken out of the students who indicated their intention to pursue Certified Professional Accounting Qualification; italicized data are measure items (demographics)

and human resource management. More than half of the students primarily had no working experience. In addition, their GPA was predominantly between 3.0 and 4.0 with the mean GPA being approximately 3.12. Thus, on the average, most students had a GPA in the first and second class upper divisions. This is expected, as the business school selects very high-performing students (students with outstanding results) from the country's second cycle institutions through a highly competitive admission process.

An interesting finding from this survey is that, most students prefer to be affiliated with the Association of Chartered Certified Accountants (ACCA)[5] compared with the other professional accounting bodies. As can be seen in Table III, 47.89 per cent of the respondents indicated a higher preference for ACCA while 27.15 per cent of the respondents prefer to pursue the ICAG professional qualification. In total, 1.56 per cent of the students were undecided on which professional body they wish to be associated with, while 7.02 per cent of the respondents wanted to be part of the Chartered Institute of Management Accountants (CIMA). A follow-up question on why the respondents opted for a particular professional accounting qualification revealed that most students who prefer ACCA, consider it to be globally recognized and as such has better job prospects both locally and internationally. Students who prefer ICAG considered it to be less expensive compared to the others, very convenient in taking the exams and the fact that an individual with other professional accounting qualification must be a member of ICAG to practice in Ghana. On the other hand, students with preference for CIMA noted that, CIMA was less expensive and with a few students taking the exam, it gives them a unique value.

An analysis of the respondents' views on the key construct for the study, capabilities, environmental issues, socio-cultural issues, preferences and constraints, was also done and a summary of the differences in responses is presented in Table IV. Together, a total of 24 items were used as indicators for these constructs. As can be seen in Table IV, out of the four indicators measuring capabilities, the indicator "mental fortitude to work towards the attainment of a CPA qualification" was rated the highest indicator by the respondents (Mean = 6.05, Standard Deviation [SD] = 1.34) whilst the indicator "experience in accounting related issues" had the least score (Mean = 5.81, SD = 1.48). Among the three indicators of the construct environmental issues, the indicator "right attitude of the institute for CPA membership" had the highest score (Mean = 5.42, SD = 1.35), while the indicator with the least score for this construct was "satisfactory process for attaining membership" (Mean = 5.26, SD = 1.30). The socio-cultural issues construct had a total of eight indicators out of which the indicator "CPA membership would make me a better employee" had the highest mean score (Mean = 6.11, SD = 1.26) with the lowest score being the "potential to become important in society with CPA qualification" (Mean = 5.40, SD = 1.39). The construct preference also had two indicators "CPA membership would make me better off" (Mean = 5.56, SD = 1.46) and "CPA membership would complement my self-actualization goals" (Mean = 5.56, SD = 1.53) recording the highest mean score, while "preference to work with an audit firm or accounting department" was least-rated indicator within this construct (Mean = 5.41, SD = 1.67). The indicator, "costly nature of attaining CPA membership" (Mean = 5.29, SD = 1.63) had the highest mean score for the construct "constraint" with difficulty in maintaining CPA membership[6] recording the least score (Mean = 3.78, SD = 1.64).

Differences in the average value for the various indicators were assessed between accounting and non-accounting students. The results from the *independent sample t-test* indicate substantial differences in most of the indicators in terms of their average scores. For constructs such as capabilities, environmental issues, socio-cultural issues and preference, the average values were significantly higher among accounting students than the non-accounting students. Non-accounting students had higher scores

	General		Accounting	Course grouping		<i>p</i> -value
	Average	SD		Non-accounting	<i>t</i> -value	
<i>Capabilities</i>						
I believe I have what it takes to become CA	6.09	1.44	6.38	5.35	8.40	0.00**
I believe I have the necessary knowledge base to become CA	5.88	1.41	6.18	5.16	8.55	0.00**
My experience in accounting related issue can help me in becoming a CA	5.81	1.48	6.09	5.05	8.04	0.00**
I have the mental fortitude to work towards the attainment of CA membership	6.05	1.34	6.29	5.45	7.10	0.00**
<i>Overall average</i>	5.96					
<i>Environmental issues</i>						
The attitude of the Institute is right for CA certification	5.42	1.35	5.56	5.08	3.92	0.00**
The right structures and system exist which enable the attainment of CA membership	5.36	1.33	5.50	5.15	2.89	0.00**
The process for attaining membership is satisfactory	5.26	1.30	5.32	5.19	1.11	0.27
<i>Overall Average</i>	5.35					
<i>Socio-cultural issues</i>						
CA membership would give me a higher social status and respect among my peers and relevant others (important and influential people in your life)	5.79	1.42	5.95	5.44	3.96	0.00**
CA membership would make me a valuable employee	6.11	1.26	6.27	5.77	4.36	0.00**
CA membership is likely to be associated with a higher salary	6.06	1.25	6.23	5.71	4.68	0.00**
CA membership is associated with a better career development prospects	6.02	1.27	6.20	5.66	4.75	0.00**
CA membership would make me important in my community	5.40	1.39	5.53	5.12	3.21	0.00**
CA membership is likely to ensure job security	5.59	1.42	5.72	5.35	2.89	0.00**
CA membership is likely to result in job promotion	5.87	1.30	6.04	5.51	4.41	0.00**
People important in my career (i.e., family, friends, professors, accounting professionals) think I should pursue CA certification	5.44	1.62	5.74	4.64	7.52	0.00**

Table IV.
Descriptive statistics of constructs

(continued)

	General		Course grouping		t-value	p-value
	Average	SD	Accounting	Non-accounting		
<i>Overall average</i>	5.79					
<i>Preference</i>						
CA membership would make me better off	5.56	1.46	5.81	4.92	6.85	0.00**
CA membership would complement my self-actualization goal	5.56	1.53	5.87	4.78	8.03	0.00**
I would love to work with an audit firm or an accounting department of any institution	5.41	1.67	5.86	4.24	11.37	0.00**
I like the challenge of pursuing CA membership	5.49	1.59	5.83	4.65	8.49	0.00**
Overall Average	5.50					
<i>Constraints</i>						
It takes too long for one to become CA member on the average	4.60	1.72	4.55	4.76	-1.28	0.20
It is too costly	5.29	1.63	5.38	5.06	2.14	0.03*
The process for attaining membership is too cumbersome and inflexible	4.51	1.65	4.46	4.59	-0.88	0.38
Exams are too difficult to pass	4.55	1.55	4.44	4.83	-2.74	0.01**
Lack of reading materials	3.79	1.67	3.70	3.90	-1.32	0.19
It is difficult to maintain CA membership	3.78	1.64	3.65	3.97	-2.11	0.04*
Overall Average	4.42					

Notes: *Difference significant at 5% level of significance; **difference significant at less than 1% level of significance; italicized words are measure items

Table IV.

pertaining to the construct “constraints” as compared to the accounting students. Thus, on an average, non-accounting students within the Ghanaian context are affected more by the constraints than the accounting students when considering to pursue a CPA qualification.

Generally, all the indicators for the respective constructs had scores above the middle level score of four. This shows that on average, the respondents rate each of the constructs on a higher scale. In assessing differences in the overall average scores among the various constructs, the capabilities construct had the highest overall average score (Overall average = 5.96, SD = 0.13). This was followed by the construct “socio-cultural factors” (Overall average score = 5.79, SD = 0.28). The construct with the least score was “constraints” (Overall average score = 4.42, SD = 0.57). These differences are confirmed with the results of the ANOVA test which yielded substantial differences among the constructs ($F = 18.17, p < 0.01$). Pairwise comparisons of the constructs revealed differences among the various pairs of constructs excluding capabilities and the sociocultural issues construct, the environmental and the preference construct and the preference and the constraints construct (Table V).

Regression results

Tests for goodness of fit for the logistic regression indicate that the overall model performs very well. The Chi-square statistic was highly significant ($\chi^2 = 148.52, p < 0.01$) which indicates the overall appropriateness of the model being used in the study. The Hosmer and Lemeshow model fit tests showed a well-fitting model ($\chi^2 = 8.10, df = 8, p = 0.42$). In addition, the Nagelkerke R^2 indicates that the model explains approximately 47 per cent of the total variation in the dependent variable giving another indication of the appropriateness of the model. Similarly, the model also correctly classified 88 per cent of the cases and this was greater than the initial proportion of classified cases of 84.2 per cent. The results of the logistic regression are as given in [Table V](#).

Out of the five factors predicted to be associated with students' intention to either pursue or not to pursue a CPA qualification, capabilities, environmental issues, socio-cultural issues, preference and constraints, three of them had a positive association with student's intention to pursue a CPA qualification after graduation. The factors include the capabilities of the student, the student's preference and socio-cultural issues. The output also demonstrates that student's academic major has a significant association with their decision to pursue a CPA qualification. Specifically, the results suggest that an accounting student is approximately four times more likely to pursue a CPA qualification as compared to a non-accounting student. Similarly, an individual with a higher GPA is twice more likely to pursue a CPA certification as compared with a student with a lower GPA. Gender was found to be insignificant with students' intention to pursue a CPA qualification([Table VI](#)).

The BPC model under BDT predicts that the main factors underlying the decision-making process of an individual are the beliefs and preferences of the individual and resource constraints. Capability, environmental factors and socio-cultural issues were used as proxy for the belief factor. Capability, as an intrinsic proxy for belief, was found to be highly significant and positively related to students' intention to pursue a CPA qualification ($p < 0.01$, coefficient of 0.120). This implies that a student's perception toward higher personal abilities is highly important in deciding to pursue a CPA qualification. This observation is consistent with findings from prior literature ([Allen, 2004](#); [Tan and Laswad,](#)

Table V.
Pairwise comparison
of constructs

	Capabilities	Environmental	Sociocultural	Preference
Environmental	0.61 (0.00**)			
Sociocultural	0.17 (0.36)	-0.44 (0.00**)		
Preference	0.46 (0.00**)	-0.15 (2.65)	-0.29 (0.34)	
Constraints	1.54 (0.00**)	0.93 (0.00**)	1.37 (0.00**)	1.08 (0.00**)

Table VI.
Results of logistic
regression

Variable	Coefficient	p-value	Wald coefficient	Odds ratio
Accounting grouping	1.48	0.00	19.30	4.40
Gender	-0.52	0.12	2.38	0.60
Grade point average	0.82	0.02	5.19	2.27
Capabilities	0.14	0.01	6.78	1.15
Environmental	-0.08	0.26	1.29	0.93
Preference	0.21	0.00	18.78	1.23
Constraint	-0.05	0.19	1.75	0.95
Socio-cultural issues	0.04	0.04	4.09	1.04

2006; Wolk and Cates, 1994). Similarly, socio-cultural issues were found to be positive and significant in predicting students' intention to pursue a CPA qualification. Thus, as proxies for beliefs, the results suggest that extrinsic factors also affect an individual's belief system which in turn influences the decision-making process. This finding is not surprising within the Ghanaian context, as the accounting profession remains one of the highly respected professions in Ghana with relatively better career development prospects. The finding is however not consistent with the observations of Wen *et al.* (2015) and Jackling and Calero (2006). Wen *et al.* (2015), using social prestige as extrinsic factor under TPB, found no significant relationship between social factors and CPA designation. Jackling and Calero (2006) also suggest that social status is not an important predictor of career choice. The last dimension of the factors making up the belief system in this research model "environmental factors" was however found not be significant in predicting students' intention to pursue CPA qualifications. Although the insignificant relationship between environment and career choice is inconsistent with the findings of Wen *et al.* (2015) and Law (2010), it is not inconsistent with the observations of Chen *et al.* (2008) and Tan and Laswad (2006). Wen *et al.* (2015) posit that the public accounting work environment of China does not encourage the pursuance of CPA.

In terms of the relationship between an individual's preference and how it influences his/her decision to pursue a CPA qualification, the study found enough support for a positive relationship between preference and intentions. With a regression coefficient of 0.215 and Wald-test-statistics of 43.542, preference has a positive and statistically significant relationship with a student's decision to pursue a CPA qualification at a level of less than 1 per cent. Thus, students' preference is a highly motivating factor among Ghanaian students in their decision to pursue a CPA qualification. This finding is consistent with the general observation in existing literature (Sugahara *et al.*, 2008; Swain and Olsen, 2011; Tan and Laswad, 2006; Wen *et al.*, 2015). Using personal interest as proxy for preference, these studies generally conclude that students' interest significantly influence their career choices.

Finally, constraints and students' intentions were assessed under the premise that regardless of an individual's beliefs and preferences for a CPA qualification, some factors may serve as deterrent factors in the pursuit of the CPA qualification. Constraint was assessed using construct indicators such as difficulty in passing and maintaining CPA certification, cost and length of time and nature of the process for attaining certification. The regression coefficient and the Wald-test statistic for constraint recorded a value of -0.060 and 6.093 , respectively, and were found to have no significant but negative relationship with students' intention to pursue a CPA qualification. The negative relationship is however expected and consistent with the premise that certain constraints may deter some students from pursuing a CPA qualification. This finding is not entirely different from results by Bagley *et al.* (2012) and Wen *et al.* (2015). As Wen *et al.* (2015) indicate, the perceived difficulty in maintaining a professional accounting qualification membership negatively affects Chinese students' intention to pursue a CPA certification.

Summary, conclusions and implications of findings

The main purpose of this study was to assess the factors that are associated with students' intention to either pursue or not pursue a CPA qualification in Ghana. This study complements and extends empirical literature on students' career choices using undergraduate students from the UGBS. The study found that students' beliefs, their preference for CPA qualification, their GPA and the type of academic major they are pursuing have a positive and significant association with their intentions to pursue a

CPA qualification in Ghana. Some identified constraints also have a negative relationship with students' intentions to pursue a CPA qualification though the relationship is not statistically significant. In terms of the type of professional accounting body students would like to be affiliated with, majority of the sampled students with the intention to pursue a CPA qualification (47.89 per cent) prefer to be affiliated with the ACCA compared with the other professional accounting bodies. The CIMA qualification was the least preferred option for students' who have the intention to pursue a CPA qualification in Ghana. Only 7.02 per cent of the sampled students prefer to be affiliated with CIMA professional body.

The findings from this study have a number of implications. First, the findings clearly suggest that students who major in accounting at the university level have greater intentions to pursue a CPA qualification. Therefore, as part of the broader strategy to increase the number of professional accountants in Ghana, there is the need to promote the study of accounting at the undergraduate level in the various universities. Second, serious attention should be given to developing the confidence of students to inculcate the "can do" spirit in them. As the regression results indicate, students with strong self-belief have greater motivations to pursue CPA qualifications. Thus, there is the need for more emphasis on capability enhancing techniques in the teaching and learning of accounting to attract more students to pursue a CPA qualification. Major stakeholders including the ICAG and accounting educators especially at the tertiary level could help in developing students' interest and confidence in the accounting profession by continuously engaging students and sensitizing them about the career prospect of the accounting profession. Third, the results also have some implications for the various professional accounting bodies. In particular, CIMA will have to intensify its campaign especially geared toward students to boost students' membership. Among the various professional accounting bodies, CIMA is the least preferred options among the university students. Instructively, ACCA's slogan of being a global professional accountancy body seems to have gone down well with most university students who have intentions to pursue CPA qualifications. Most students prefer to be affiliated with ACCA compared with the other professional bodies because they consider ACCA's certification to be globally recognized and as such has better job prospects both locally and internationally. ICAG, on the other hand, could improve upon its membership among university students' by capitalizing on the cost advantages it has over the other bodies. Taken together, the findings of this study offer some insights on business students' career choices and professional accounting education from a developing country perspective.

Despite the significant contributions from this research, the findings of this study are limited in some respects. First, business students from only one public university in the country participated in this study. This may affect the interpretation and generalization of the results of this study. Using students across a wider range of universities (both private and public) could help improve the generalization of the findings. Second, the study only examined students' intentions to pursue professional accounting qualification and the predictors of such intentions. Results should therefore be interpreted with caution, as intentions may change with time. Future studies could revisit the issues examined in this study using students who have actually enrolled in a CPA qualification program. This should be useful in ascertaining whether the factors identified to be associated with an individual's intention to pursue a CPA are in any way similar to those factors that actually motivate one to eventually enroll for a CPA program. Moreover, while the study makes a modest attempt to identify the factors that are associated with students' intentions to pursue

a CPA qualification program in Ghana, the factors identified in this study are by no means exhaustive of all the predictors of students' intentions. Future studies could also explore by means of a qualitative approach; other factors that may be related to students' intention to pursue a CPA within the Ghanaian context.

Notes

1. This is defined as those external factors that inhibit an individual from undertaking a particular activity.
2. The working experience includes experience gained with an accounting or auditing firm, working under a competent accountant in industry or teaching accounting related subject in a tertiary institution.
3. An individual's attitude towards a particular behavior/action constitute the personal influences and his/her perception of social pressures to undertake a particular behavior/action form the social influence i.e. subjective norms (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980).
4. Behavioral beliefs are beliefs that determine attitude and normative beliefs are beliefs influenced by the opinion of others (Jackling and Keneley, 2009).
5. This is not surprising given that students' from UGBS have over the years excelled in the ACCA exams.
6. Maintaining your membership status with any of the professional accountancy bodies involves passing the required exams, achieving some required competency/skills set, attending conferences organized by the institute as part of the continuous professional development (CPD), paying annual membership subscription, etc.

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Construct (Indicators)	Loadings (Weights)
<i>Capabilities</i>	
I believe I have what it takes to pursue CPA qualification	0.80
I believe I have the necessary knowledge base to pursue CPA	0.82
My experience in accounting related issues can help me in attaining a CPA qualification	0.83
I have the mental fortitude to work towards the attainment of CPA qualification	0.67
<i>Environmental issues</i>	
The attitude of the professional bodies is right for CPA certification	0.79
The right structures and system exist which enable the attainment of CPA qualification	0.83
The process for attaining membership is satisfactory	0.85
<i>Socio-cultural issues</i>	
CPA qualification would give me a higher social status and respect among my peers and other important and influential people in my life	0.77
CPA qualification would make me a valuable employee	0.88
CPA qualification is likely to be associated with a higher salary	0.85
CPA qualification would be associated with better career development prospects	0.80
CPA qualification would make me important in my community	0.74
CPA qualification is likely to ensure job security	0.82
CPA qualification is likely to result in job promotion	0.83
People important in my career decision (i.e., family, friends, professors, accounting professionals) think I should pursue CPA qualification	0.65
<i>Preference</i>	
I prefer CPA qualification to other professional qualifications	0.82
I prefer CPA qualification because I think it would complement my self-actualization goal	0.81
I prefer to work with an audit firm or an accounting department of any institution	0.83
I like the challenge of pursuing CPA qualification	0.79
<i>Constraints</i>	
It takes too long for one to become a CA member on the average	0.68
It is too costly	0.85
The process for attaining CPA qualification is too cumbersome and inflexible	0.79
Exams are too difficult to pass	0.74
Lack of reading materials	0.62
It is difficult to maintain CPA membership	0.60

Table A1.
Indicator loadings used as weights in attaining a composite score for the independent variables

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