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# Factors Affecting Student Performance in the First Accounting Course in Diploma Program under Political Conflict

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## Abstract

Investigating student performance in the first accounting course, under situations of political conflict, is a unique and rare case of investigation. In light of this gap, the current study aims to investigate the impact of some factors on student performance in the first accounting course in diploma program under political conflict. Using correlation matrix and multiple regression analysis, a sample of 122 students is analyzed. The study finds that three factors (CGPA, high school grade, and high school branch) have a significant impact on student performance in the first accounting course under political conflict. Regarding student's gender and age, the current study finds no significant differences between males and females, and between younger and older students in their performance in the first accounting course.

**Keywords:** Student performance; the first accounting course; diploma program; political conflict.

## 1. Introduction

Motivations towards learning are matching with both career and academic reasons for entering higher education (Byrne et al., 2012). Furthermore, obtaining high academic performance is of primary importance to students, teachers, and the higher educational institutions; whereas, academic failure creates emotional and financial costs for students (Gracia, & Jenkins, 2003). Therefore, identifying factors affecting student performance is very significant since educational institutions and lecturers, as well as teachers, have to figure out how to improve students' performance, and to encourage students for better achievement (Byrne, & Flood, 2008).

Factors affecting student performance have received considerable attention in the education literature (Eskew, & Faley, 1988). In the accounting context, accounting academics are greatly interested in factors affecting student performance in introductory financial accounting specifically (Jones, & Wright, 2011). In effect, introductory accounting course is very important course since it provides business students with basic knowledge in using accounting information as a tool in decision making. In addition, it is considered as a foundation course for later classes, and passing it is generally required for entry to the business school (Bernardi, & Bean, 1999; Etter, Burmeister, & Elder, 2000; Yu, 2011). However, introductory accounting course is frequently characterized by high failure and withdrawal rates. Accordingly, improving student performance in the first accounting course can be considered as an important goal for accounting programs (Etter, et al., 2000; Yu, 2011).

Most studies concerning student performance in introductory accounting course have been applied on bachelor's degree students; whereas, student performance in this course is not considered in diploma program as in bachelor's degree. Moreover, most research about determinants of student's academic performance in introductory accounting course have been conducted in developed countries (Cheung, & Kan, 2002; Guney, 2009; Koh, & Koh, 1999; Tho, 1994), (see e.g., Baldwin, & Howe, 1982; Bartlett, Peel, & Pendlebury, 1993; Doran, Bouillon, & Smith, 1991; Eskew, & Faley, 1988; Stephen P. Keef, 1988; Stephen P Keef, & Roush, 1997; Lipe, 1989; F. Mitchell, 1985; Schroeder, 1986; Tyson, 1989); whereas, this topic has received less considerable attention in other countries (Garkaz, Banimahd, & Esmaeili, 2011). More importantly, according to the authors, investigating such a topic in educational institutions operating under political conflict is not considered as in the more developed and other developing countries. Educational institutions operating under situations of political conflict are unique and rare cases of investigation. An adequate example is Palestine, where educational institutions are operating under political conflict between Palestine and Israel. Further, research findings regarding this topic are still mixed (Bernardi, & Bean, 1999; Byrne, & Flood, 2008; Carpenter, Friar, & Lipe, 1993; Eskew, & Faley, 1988; Gist, Goedde, & Ward, 1996; Grace, & Black, 2011; Jones, & Wright, 2011; Papageorgiou, & Abdel, 2014; Rebele et al., 1998; Rotenstein, Davis, & Tatum, 2009; Yu, 2011). In addition, it is not clear if evidence from developed and developing countries can be generalizable to an uncertain environment. In short, evidence from such unique environment is important to appreciate differences and similarities in accounting education, suggesting that this topic is still questionable. Therefore, the current paper is expected to extend the current literature by investigating this topic in Palestine as a unique environment affected by political conflict.

To the best of our knowledge, the only other considerable study that explores factors affecting student academic performance in the first accounting course in Palestine is Naser, & Peel (1998). Our study differs from Naser, & Peel (1998) in many aspects: First, the current study attempts to determine factors affecting student performance in the first accounting course using data from diploma program, not bachelor program. Second, student's grade in high school and CGPA are not investigated by Naser, & Peel (1998). Third, the present study is based on data drawn from governmental university, not public university as in Naser, & Peel (1998). Fourth, Naser, & Peel (1998) collect their data from students who were enrolled on summer semester, not normal semester (first and second semesters). However, the study by Naser, & Peel (1998) was conducted like before twenty years ago. Consist with Gracia, & Jenkins (2003), such studies may have become outdated because of the change in the education environment in the last twenty years.

In light of the importance of this topic and the mentioned gaps, the present study aims to examine the impact of high school grade, high school branch, CGPA, gender, and age on student performance in the first accounting course in diploma program under political conflict. It is expected that the results and the recommendations generated by this study will help to improve student academic performance in the first accounting course in areas experiencing political instability.

The remainder of our paper is organized as follows. In Section 2, we review the related literature and develop the hypotheses. Section 3 presents the method. The results are discussed in Section 4. Section 5 summarizes some concluding remarks.

## **2. Review of literature and hypotheses developments**

### **2.1. High school grade**

In the US, Eskew, & Faley (1988) develop a model to explain student examination performance in the first college-level financial accounting course. Their results reveal that student's grade in high school accounts forms a significant portion of the variance in examination performance, a finding similar to that of Carpenter, et al. (1993) who study the performance of students in introductory accounting courses in the US. Their analysis confirms that student performance is positively related to his/her grade in high school. This view is further supported within distance education. According to Richardson, Morgan, & Woodley (1999), the level of education prior to embarking on studies in the higher education is found to be strongly related to students' academic outcomes through open learning. From one institution in Scotland, Duff (2004) also reports findings that student performance in school examinations remains the best predictor of student academic performance in first-year undergraduate accounting.

Apparently, the prior discussion suggests a positive relationship between student academic performance in the first accounting course and his/her grade in high school. Therefore, we expect the same association between student performance in the first accounting course and high school grade. Accordingly, we state our first hypothesis in the alternative form with positive direction as follows:

***H1: High school grade is positively associated with student performance in the first accounting course.***

### **2.2. High school branch**

The influence of prior accounting education on student performance in first year university accounting courses is still the most widely researched factor in accounting education literature. Despite its frequency of study, no consensus exists on its influence on student performance (Gracia, & Jenkins, 2002).

Several studies have failed to find any evidence of the effect of high school accounting education on student performance and have supported the notion that high school accounting background has no effect on student performance in university accounting courses. In the US, Baldwin, & Howe (1982) conduct a comparison between students who studied accounting in high school and other students who did not. They find no significant differences between the two groups in their subsequent performance in university accounting courses. They argue that students who studied accounting in high school may be overconfident and unprepared to make the extra effort required. Collecting data from the first level accounting course at the Bowling Green State University, Schroeder (1986) offers interesting findings. He observes no significant difference in performance of students without prior high school accounting bookkeeping and those with one year. Whereas, he documents that students with more than one year of high school accounting education achieve significantly better marks on all examinations in the first accounting course. In the Australian context, some Australian studies also fail to find a significant association between prior accounting knowledge and student academic performance in accounting courses. Investigating the effect of study mode and general ability on student performance in a second year

management accounting course, Jackling, & Anderson (1998) show that prior study of accounting at secondary school has no significant effect on performance in accounting. Analyzing 1,049 graduates from post-graduate business programs at an Australian university, Eddey, & Baumann (2009) find no significant differences between students with prior studies in business and their peers in the same business programs. In line with this, Bartlett, et al. (1993) document that prior education of accounting is not found to be an influential factor in determining performance in either the first year or final year university examinations. Similar results by Gammie, Jones, & Robertson-Millar (2003) and Crawford, & Wang (2014) confirm that type of secondary education is not differentiating variables in respect of final year undergraduate performance, in the UK. An Iranian study conducted by Shoorvarzy, & Kholousi (2011) indicates that students' fields of study in high school have no significant impact on their success in financial management course.

On the other hand, other studies document a positive relationship between high school accounting education and student performance in university accounting courses. Looking at a sample drawn from the University of Wisconsin-La Crosse, Bergin (1983) considers the consequence of prior accounting education on student performance in the introductory financial accounting course. Their results exhibit that students who have studied accounting in high school perform better than their peers in the class at the beginning of the course, but there is no important difference between all students at the end of the course. Again in the US, Eskew, & Faley (1988) support the argument that students who had high school bookkeeping experience could achieve better performance in college level accounting courses than those who had no experience. Doran, et al. (1991) offer conflicting conclusions concerning the impact of high school accounting on student performance. They document that having taken high school bookkeeping is found to be positively related to student performance in Accounting Principles I, and negatively related to his/her performance in Accounting Principles II. Xiang, & Gruber (2012) revisit this debate and show that the relationship between the two variables is statically significant and positive. They highlight the importance of studying accounting course in high school. From Australia, Farley, & Ramsay (1988) test the relationship between student performance in first year tertiary accounting and secondary accounting education. At high levels of significance, their findings reject the hypothesis that student academic performance is independent of secondary accounting knowledge. Sampling an Australian university, Auyeung, & Sands (1994) find that secondary school accounting is the best explanation of student success in first level accounting. Further studies offer similar conclusions, studies by Rohde, & Kavanagh (1996), Rankin, Silvester, Vallely, & Wyatt (2003), and Alcock, Cockcroft, & Finn (2008) show that student who studied accounting in high school achieves higher performance than those who did not. This view is further supported by Hartnett, Römcke, & Yap (2004) who document that accounting study prior to university is significantly associated with student performance in three undergraduate accounting courses. In the UK, the study by Falconer Mitchell (1988) concludes that students without either mathematics or high school accounting appear to be mostly at risk of underperforming in the computational and quantitative aspects of courses. In Canada, Lynn, Shehata, & White (1994) reject the hypothesis that there is no significant difference in performance in the first accounting course between those students who have studied accounting in high school and those who have not, concluding that students who had taken high school accounting courses are likely to perform better in the first university accounting course than those who did not. In a large university in Western Canada, Jones, & Wright (2011) investigate the consequence of cognitive style on student performance in an introductory financial accounting. Among many results, they confirm the positive relationship between high school accounting and student performance in this course. In Ireland, Byrne, & Flood (2008) examine the relationships among background variables and student performance of first year accounting students at Dublin City University. They report a significant and positive relationship between prior knowledge of accounting and students' academic performance. From New Zealand, the results reported by Stephen P. Keef, & Hooper (1991) are in agreement with the opinion that school accounting background affects subsequent academic performance at university positively. Using data from Hong Kong, the results provided by Gul, & Cheong Fong (1993) are consistent with the notion that student performance is directly affected by previous knowledge of accounting. However, the study by Lee (1999) reports the same findings in the context of Hong Kong. As an evidence from Malaysia, Tho (1994) also confirms that having studied high school accounting can be considered as an important predictor of student performance at the University of Malaya. In west bank, Naser, & Peel (1998) provide further evidence that students with previous accounting background perform at a superior level. Yu (2011) notices the same findings in a Philippine university. Using data from the University of South Africa, Papageorgiou, & Abdel (2014) show that prior knowledge in accounting contributes toward student performance in the first year of study.

These inconstant findings are not surprising. On one hand, high school accounting background might help students 'learn how to learn accounting'. On the other hand, students with prior accounting background may still have difficulty with the first postsecondary accounting course (Xiang, & Gruber, 2012). Therefore, we state our

second hypothesis in the null form as follows:

***H2: High school branch has no effect on student performance in the first accounting course.***

### **2.3. Gender**

The gender issue has encouraged accounting education literature to determine whether differences in academic performance between female and male accounting students are existed (Auyeung, & Sands, 1994). However, the influence of gender on student performance is widely studied, but research findings are considerably mixed (Gracia, & Jenkins, 2002).

In a US study, Lipe (1989) find that neither student gender nor instructor gender impact student grades, except through an interaction between them. Her results show that males perform better than females in male-instructed classes, and females perform better with female instructors. Furthermore, the results found in Carpenter, et al. (1993) support the view that there are no significant differences between females and males in their academic performance in introductory accounting courses, in the US context. Using data from one US private university, Nourayi, & Cherry (1993) discuss accounting students' performance and personality types. Except for one accounting course grade in which males outperform females, they conclude that gender appears to be an insignificant factor. A similar analysis for male and female students conducted by Gist, et al. (1996) shows that gender is not significant in explaining academic performance of minority student in a US introductory accounting class. In Australia, findings of Jackling, & Anderson (1998) address that gender is not significant in explaining student performance in a second year management accounting course. Using a sample from Birzeit University located in Palestine, the study by Naser, & Peel (1998) also does not support the notion that gender has significant association with student performance in the first level principles of accounting course. Focusing on student performance in Intermediate Accounting I, Bernardi, & Bean (1999) document that gender is not a considerable factor in student performance in this course. Using data from Scotland in the UK, Gammie, Jones, et al. (2003) attempt to understand determinants of accountancy undergraduate performance. They detect no gender differences in accounting students' performance. Again in the UK, the paper by Gammie, Paver, Gammie, & Duncan (2003) examines gender differences in accounting education. Except the first year accounting module and auditing module, they find no gender differences in any of the final year modules. Similarly, Ferreira, & Santoso (2008) show that there are no significant gender-driven differences in students' performance in management accounting subjects, at a large Australian university. Using Irish data, Byrne, & Flood (2008) examine the effect of background variables on academic performance of first year accounting students. Their findings fully support the hypothesis that gender is not significantly associated with academic performance. In the Filipino context, Yu (2011) also emphasizes that gender have no effect on student performance in introductory college accounting courses. Based on data collected from 140 students in the bachelor's degree, Shoorvarzy, & Kholousi (2011) attempt to identify the effective factors on the success in financial management course. They document that females and males receive approximately equal grades in financial management course in Iran. Using data from South Africa, Papageorgiou, & Abdel (2014) find no meaningful relationship between females and males in the first accounting course among bachelor's degree students.

On the other hand, some studies produce conflicting inferences concerning the impact of gender on academic performance in accounting courses, and claim that males perform better than females in the accounting degree program. Analyzing determinants of student performance in Accounting Principles I and II, in the US, Doran, et al. (1991) demonstrate that male students perform better than females in Accounting Principles I, but not in Accounting Principles II. Focusing on open learning in Australia, De Lange, Waldmann, & Wyatt (1997) concur that male students tended to outperform female students, on average. Investigating determinants of performance in an accounting degree program, Koh, & Koh (1999) confirm that males significantly perform better than females in the accounting degree program, in Singapore. Considering factors that may determine the likelihood of passing the Uniform CPA Exam, Brahmasrene, & Whitten (2001) support the idea that males are more likely to pass the examination than females. Examining the effect of course scheduling on student performance, Dunn, & Hooks (2015) lend more support to the argument that females do not perform as well on the final examination of Principles of Accounting (I) course as males, at one US private university.

On the contrary, some studies adopt a positive position towards the academic performance of females in the accounting degree program. Comparing the performance of female and male students in upper-division accounting classes, Mutchler, Turner, & Williams (1986) document that female students consistently outperform male students in the US context. Consequently, Tyson (1989) attempts to explain why female students outperform males in university accounting examinations. He indicates that females' superior grade is not limited to upper-division accounting classes, and suggests that females' self-reported higher work needs may explain



their generally superior performance in all courses. In a study at a Welsh university in an undergraduate accounting program, Gracia, & Jenkins (2003) confirm that gender, in favor of females, is positively associated with student performance, at second year level. In Iran, Garkaz, et al. (2011) emphasize that gender is meaningfully associated with student academic performance at Islamic Azad University. They lend additional support to the claim that female students are getting higher academic achievement than male students.

Given the competing arguments about this variable, gender, we choose the null form for our third hypothesis as follows:

***H3: Gender plays no role on student performance in the first accounting course.***

#### ***2.4. Cumulative grade point average (CGPA)***

The significance of CGPA as a predictor factor of academic performance is considered in the accounting education literature widely. Using data from University of Missouri in the US, Dockweiler, & Willis (1984) document that CGPA, prior to entering the accounting program, is the best predictor of subsequent academic performance in the case of undergraduate accounting programs. Evaluating AICPA tests conducted in the US, Ingram, & Petersen (1987) attempt to predict student performance in accounting courses at the University of Iowa. They concur that the most important factor for predicting accounting student performance is student's CGPA for the first two years of college. Again, in the US, the research by Gist, et al. (1996) study the influence of some factors on black student performance in accounting principles. They confirm that CGPA is the most important factor in explaining the academic performance of minority student in Principles of Accounting. As an extended study, Ewer, Greer, Bridges, & Lewis (2002) examine the impact of class length on student performance in two introductory accounting courses. Among many results, they confirm that students with higher CGPAs tend to perform better than students with lower CGPAs, at Southwest Missouri State University, in the US. Investigating the effect of student origin on accounting performance, Hartnett, et al. (2004) observe significant relationships between accounting performance and student's ability measured by student's CGPA. In Canada, Jones, & Wright (2011) investigate the consequence of cognitive style on student performance in an introductory financial accounting. They also notice a positive association between student's CGPA and his/her performance in an introductory financial accounting. At one US private university, Dunn, & Hooks (2015) examine the effect of course scheduling on student performance in a Principles of Accounting (I) course. Regarding CGPA, they document a positive relationship between this factor and student performance in this course. Attempting to understand the impact of incorporating writing-to-learn assignments on student performance in an introductory financial accounting course, Grimm (2015) shows that the coefficients for CGPA are positively significant in all models, supporting the claim that CGPA directly affects student performance in introductory financial accounting courses. Examining whether the admission characteristic of student engagement can be considered as an indicator of student performance in master accounting program, Buckless, & Krawczyk (2016) offer more support to the opinion that undergraduate CGPA is positively associated with accounting student performance in master program. Investigating the impact of the accounting cycle course on student success in the intermediate accounting course, Siagian, & Khan (2016) also find that students with higher CGPAs have a greater probability of getting a better intermediate course grade than students with lower CGPAs. Obviously, the mentioned arguments strongly support the idea that student performance in the first accounting course is positively affected by student's CGPA. Therefore, we adopt the following hypothesis in the alternative form with positive direction as follows:

***H4: CGPA positively impacts student performance in the first accounting course.***

#### ***2.5. Age***

A number of studies from the accounting education literature have found no significant differences between young and mature students in their academic performance in accounting courses. Exploring the impact of some factors on student performance in a first level Principles of Accounting course, Naser, & Peel (1998) document no significant role of age on student performance, in Palestine. In the UK, Gammie, Jones, et al. (2003) confirm this finding, concluding that student age is not identified as being significant variable in respect of final year undergraduate performance. This opinion is further supported by Duff (2004), who indicates that age is not significantly associated to student academic performance or progression of first-year accounting and business economics undergraduates, suggesting that younger students are likely to perform as well as their mature counterparts.

Further studies offer different findings, in favor of older students, Using a logit model, Brahmasrene, & Whitten (2001) document that age plays a significant role in order to pass the US CPA examination. According to Lane, & Porch (2002), age is found to have an important impact on the performance of non-specialist undergraduate students on accounting modules, suggesting that mature students performing better. The study conducted in the

US by Dunn, & Hooks (2015) on the relation between course scheduling and student performance in a Principles of Accounting (I) course provides further support to the notion that mature students outperform younger students. At a large southern US university, Buckless, & Krawczyk (2016) examine whether the admission characteristic of student engagement can be considered as an indicator of student performance in master accounting program. Their results are in line with the assumption that older students perform better than younger students.

On the other hand, some studies support the opposite position that assumes that age is negatively associated with student performance. At the 0.05 significance level, Koh, & Koh (1999) document that younger students perform better than older students in the accountancy degree program, in Singapore. Adopting a quantitative approach, Gracia, & Jenkins (2003) attempt to explore factors associated with student performance on an undergraduate accounting program at a Welsh university. Among many results, they show that age is negatively associated with student performance, at second year level. Compared with younger postgraduate students, Eddey, & Baumann (2009) confirm that older postgraduate students achieve lower academic performance in in an Australian graduate program.

Given the inconstant results about the impact of student's age on his/her performance, we put our final hypothesis in the null form as follows:

**H5: Age has no impact on student performance in the first accounting course.**

### 3. Method

#### 3.1. Data

The study population includes all students who studied the first accounting course in diploma program. We draw a sample from a governmental university located in Palestine. The data includes student's grade in the first accounting course, high school grade, gender, high school branch, age, and CGPA. Table 1 provides descriptive statistics about the data.

Table 1: Descriptive statistics

	Observations	Mean	Std. Deviation	Minimum	Maximum
AIG	122	64.28	11.58	35	95
HSG	122	65.45	7.34	52	88.6
GENDER	122	0.483	0.50	0	1
AGE	122	21.41	2.19	18	31.2
CGPA	122	63.84	7.48	50	87.2
HSB	122	0.64	0.48	0	1

Notes: This table summarizes descriptive statistics of the study variables. AIG is student's grade in the first accounting course; HSG is student's high school grade; GENDER is student's gender, which equals one for males, and zero otherwise; AGE is student's age; CGPA is student's cumulative grade point average; HSB is student's high school branch, which equals one if the student came from commercial branch in high school, and zero otherwise.

As shown in Table 1, the number of all observations is 122 students. The minimum value of students' grades in the first accounting course is 35 marks, the maximum value is 95 marks, and the average value is about 64 marks. Students' grades in high school range from 52 to 88.6 marks for the sample with a mean of 65.45. The mean value of gender represents the proportion of males. Therefore, 59 students are males ( $122 \times 0.483$ ), and the rest are 63 females ( $122 - 59$ ). The authors divide students' high school branches into two main categories, namely commercial branch, and other branches (scientific branch and human branch). The mean value of high school branch represents the proportion of commercial students. Thus, 78 students studied commercial branch in high school ( $122 \times 0.64$ ), and the rest, 44 students ( $122 - 78$ ), are related to other high school branches. The mean age of the sample is about 21 years, and it varies from 18 to 31 years with a standard deviation of 2.19 years. Finally, students' CGPAs range between 50 and 87 marks, with an average of 64 marks and a standard deviation of 7.48 marks.

#### 3.2. Correlation and regression model

To test the individual impact of each independent variable on student performance in the first accounting course, the authors decide to use Pearson correlation, as a univariate test. On the other hand, the authors use the following multiple regression model, as a multivariate test, to examine the joint effect of high school grade, gender, high school branch, CGPA, and age on student performance in the first accounting course.

$$AIG_i = \beta_0 + \beta_1 HSG_i + \beta_2 HSB_i + \beta_3 GENDER_i + \beta_4 CGPA_i + \beta_5 AGE_i + e_i$$

where  $AIG_i$  represents student's grade in the first accounting course;  $HSG_i$  is student's high school grade;  $HSB_i$  is student's high school branch, which equals one if the student came from commercial branch in high school, and

zero otherwise;  $GENDER_i$  is student's gender, which equals one for males, and zero otherwise;  $CGPA_i$  is student's cumulative grade point average;  $AGE_i$  is student's age;  $e_i$  is the error term.

The impact of any independent variable (high school grade, gender, high school branch, CGPA, and age) on student performance in the first accounting course is captured by its coefficient,  $\beta$ . A significantly negative (positive) value of  $\beta$  reveals that the related independent variable with that  $\beta$  decreases (increases) student performance in the first accounting course, which means that this factor is negatively (positively) associated with student performance in the first accounting course.

#### 4. Results and discussion

Before discussing the results, we test several assumptions related to the classical linear regression model, namely assumption of no perfect multicollinearity between the independent variables, homoscedasticity assumption of the error terms, no autocorrelation between the error terms, and normality assumption of the error terms. After examining these assumptions, the authors conclude that the interpretation of the regression estimates is valid.<sup>1</sup> Next, we discuss, in details, the estimated results of correlation matrix (univariate test) and multiple regression analysis (multivariate test).

##### 4.1. Univariate test (correlation matrix)

Table 2 reports results of Pearson correlation of all variables. It can be seen that CGPA, high school grade, and high school branch are significantly associated with student performance in the first accounting course. In contrast, gender and age are not significantly important in explaining the variation in the dependent variable.

Table 2: Pearson correlation coefficient matrix

	AIG	HSG	GENDER	AGE	CGPA	HSB
AIG	1					
HSG	0.486***	1				
GENDER	-0.0718	-0.216**	1			
AGE	0.0314	0.0636	0.261***	1		
CGPA	0.678***	0.448***	-0.193**	0.00943	1	
HSB	0.353***	0.0884	0.146	-0.215**	-0.0588	1

Notes: This table shows Pearson correlation coefficients between the independent variables and the dependent variable. AIG is student's grade in the first accounting course; HSG is student's high school grade; GENDER is student's gender; AGE is student's age; CGPA is student's cumulative grade point average; HSB is student's high school branch, which equals one if the student come from commercial branch in high school, and zero otherwise. \*, \*\*, and \*\*\* indicate significance at the 5%, 1%, and 0.1% levels, respectively.

Results of correlation matrix reveal that CGPA is the best explanation of student performance in the first accounting course in diploma program. Its coefficient, 0.678, is the highest value with a significant level at 1%. High school grade comes in the second place. Its coefficient, 0.486, is significant at 1%, meaning that student's high school grade has significant and positive influence on his/her performance in the first accounting course. Next, student performance in the first accounting course is affected by high school branch significantly at 1%. The positive coefficient of this factor suggests that students who came from commercial branch could achieve better performance in the first accounting course than those who came from other branches (scientific branch and human branch). Finally, gender and age play no significant role in determining student performance in the first accounting course.

##### 4.2. Multivariate test (regression analysis)

Table 3 shows results of our multiple regression analysis.  $R^2$  of our regression model is about 65 percent, meaning that the independent variables (high school grade, gender, high school branch, CGPA, and age) can

<sup>1</sup> Notably, the sign of the correlation coefficient between AIG and GENDER is negative (-0.0718); whereas, it is positive in the multiple regression (0.020), suggesting that GENDER variable is affected by multicollinearity as its sign is changed from negative to positive. In this issue, the authors argue that this problem can be ignored because GENDER plays no significant role either under correlation matrix with negative sign or under multiple regression with positive sign. In effect, insignificant coefficient indicates that this coefficient is not different from zero (Gujarati, 2004). Accordingly, these two coefficients (-0.0718 and 0.020) are not different from zero statistically, suggesting that these signs are meaningless in our case. In close, our conclusion that GENDER has no significant impact on student's performance in the first accounting course is supported by correlation matrix and multiple regression analysis, although they provide different signs.



explain 65 percent of the variation in the dependent variable (student performance in the first accounting course). The p value of *F*-statistic (42.65) is less than 1%. Thus, one can reject the null hypothesis that all independent variables have no effect on the dependent variable collectively. Therefore, the independent variables have significant influence on the dependent variable jointly.

Table 3: Regression summary

AIG	Expected sign	Coefficients.	t-statistic	p-value
HSG	+	0.259***	2.57	0.006
GENDER	?	0.020	0.01	0.988
AGE	?	0.527*	1.66	0.099
CGPA	+	0.970***	10.06	0.000
HSB	?	9.519***	6.74	0.000
Constant	?	-31.975***	-3.51	0.001
Observations	122			
F-statistic	42.65***			
R-squared	0.6477			

Notes: This table summarizes the regression of student performance in the first accounting course according to each independent variable. AIG is student's grade in the first accounting course; HSG is student's high school grade; GENDER is student's gender, which equals one for males, and zero otherwise; AGE is student's age; CGPA is student's cumulative grade point average; HSB is student's high school branch, which equals one if the student came from commercial branch in high school, and zero otherwise. The reported p-values are based on two-tailed levels and on one-tailed levels when the prediction is directional. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively.

Consistent with the univariate test, our results show that CGPA, high school grade, and high school branch have significant impact on student performance in the first accounting course. On the contrary, gender and age are not significantly important in this analysis. The estimated coefficient of student's grade in high school (0.259) suggests that an increase one unit in student's grade in high school is expected to increase his/her grade in the first accounting course about 0.259. For example, a student with a 90 high school score is expected to obtain that is 5.18 marks higher than a student with a 70 high school score ( $90 \times 0.259 - 70 \times 0.259 = 5.18$ ). Similarly, the estimated coefficient of student's CGPA (0.970) suggests that an increase one unit in student's CGPA is expected to increase his/her grade in the first accounting course about 0.970. For example, a student with a 80 CGPA is expected to obtain that is 19.4 higher than a student with a 60 CGPA ( $80 \times 0.970 - 60 \times 0.970 = 19.4$ ). In this regard, student ability, as measured by CGPA (Dunn, & Hooks, 2015; Gelardi, & Emby, 2005), can draw a picture on his/her performance in the first accounting course. The estimated coefficient of student's high school branch (9.519) suggests that students who came from the commercial branch are expected to achieve better performance in the first accounting course than those who came from other branches (scientific branch, and human branch). More specifically, their grades in the first accounting course are expected to be higher by about 9.5 marks than their peers who did not take high school accounting. Unlike other branches, commercial branch in high school teaches students the basic commercial education, including Principles of Accounting. Therefore, this result is not surprising. Finally, gender and age have no significant effect on student performance in the first accounting course.

## 5. Conclusion

The current study aims to investigate the impact of some factors on student performance in the first accounting course in diploma program under political conflict, as this program is not considered in past research compared with bachelor's degree. More importantly, this research work is applied in Palestine, as a unique and rare case of investigation, where educational institutions are operating under political conflict between Palestine and Israel. Therefore, our study is expected to extend the current literature by investigating this topic in diploma program on one hand, and in a unique and rare area affected by political conflict. The study finds that three factors (CGPA, high school grade, and high school branch) positively and significantly impact student performance in the first accounting course. On the other hand, gender and age have no significant role on student performance in the first accounting course. Our findings have important implications for future students who shall study Principles of Accounting in the first semester, and wish to achieve good results in this course. According to our findings, student who came from commercial branch in high school with high grades in high school and CGPA is expected to achieve higher marks in the first accounting course. Notably, students do not have to worry so much about their gender or age since these factors play no significant role in this issue. Like any empirical research, our study has some limitations. First, the sample represents only students who studied the first accounting course in diploma program at one university. Second, other factors (such as class size and period length of teaching)

that may affect student performance are not considered in the current study. Future research can investigate other aspects that may affect student performance in the first accounting course under political conflict such as: the impact of class size on student performance in the first accounting course under political conflict; the impact of the period length of teaching on student performance in the first accounting course under political conflict; the differences between diploma students and bachelor students in their performance in the first accounting course under political conflict is suggestive for future research as well.

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## References

- Alcock, J., Cockcroft, S., & Finn, F. (2008). Quantifying the advantage of secondary mathematics study for accounting and finance undergraduates. *Accounting & Finance*, 48(5), 697-718.
- Auyeung, P. k., & Sands, D. F. (1994). Predicting success in first-year university accounting using gender-based learning analysis. *Accounting Education*, 3(3), 259-272.
- Baldwin, B. A., & Howe, K. R. (1982). Secondary-level study of accounting and subsequent performance in the first college course. *Accounting Review*, 619-626.
- Bartlett, S., Peel, M. J., & Pendlebury, M. (1993). From fresher to finalist: a three year analysis of student performance on an accounting degree programme. *Accounting Education*, 2(2), 111-122.
- Bergin, J. L. (1983). The effect of previous accounting study on student performance in the first college-level financial accounting course. *Issues in Accounting Education*, 1(1), 19-28.
- Bernardi, R. A., & Bean, D. F. (1999). Preparer versus user introductory sequence: the impact on performance in Intermediate Accounting I. *Journal of Accounting Education*, 17(2), 141-156.
- Brahmasrene, T., & Whitten, D. (2001). Assessing Success on the Uniform CPA Exam: A Logit Approach. *Journal of Education for Business*, 77(1), 45-50.
- Buckless, F., & Krawczyk, K. (2016). The relation of student engagement and other admission metrics to Master of Accounting student performance. *Accounting Education*, 25(6), 519-533.
- Byrne, M., & Flood, B. (2008). Examining the relationships among background variables and academic performance of first year accounting students at an Irish University. *Journal of Accounting Education*, 26(4), 202-212.
- Byrne, M., Flood, B., Hassall, T., Joyce, J., Arquero Montañó, J. L., González González, J. M., & Tournagermanou, E. (2012). Motivations, expectations and preparedness for higher education: A study of accounting students in Ireland, the UK, Spain and Greece. *Accounting Forum*, 36(2), 134-144.
- Carpenter, V. L., Friar, S., & Lipe, M. (1993). Evidence on the performance of accounting students: Race, gender, and expectations. *Issues in Accounting Education*, 8(1), 1-17.
- Cheung, L. L. W., & Kan, A. C. N. (2002). Evaluation of Factors Related to Student Performance in a Distance-Learning Business Communication Course. *Journal of Education for Business*, 77(5), 257-263.
- Crawford, I., & Wang, Z. (2014). Why are first-year accounting studies inclusive? *Accounting & Finance*, 54(2), 419-439.
- De Lange, P., Waldmann, E., & Wyatt, K. (1997). Personal characteristics and academic achievement of undergraduate accounting students studying through open learning. *Accounting Education*, 6(4), 295-306.
- Dockweiler, R. C., & Willis, C. G. (1984). On the use of entry requirements for undergraduate accounting programs. *Accounting Review*, 496-504.
- Doran, B. M., Bouillon, M. L., & Smith, C. G. (1991). Determinants of student performance in accounting principles I and II. *Issues in Accounting Education*, 6(1), 74-84.
- Duff, A. (2004). Understanding academic performance and progression of first-year accounting and business economics undergraduates: the role of approaches to learning and prior academic achievement. *Accounting Education*, 13(4), 409-430.
- Dunn, K., & Hooks, K. (2015). COURSE SCHEDULING AND STUDENT LEARNING: AN EMPIRICAL INVESTIGATION. *Global Perspectives on Accounting Education*, 12, 73-95.
- Eddey, P., & Baumann, C. (2009). Graduate Business Education: Profiling Successful Students and Its Relevance for Marketing and Recruitment Policy. *Journal of Education for Business*, 84(3), 160-168.

- Eskew, R. K., & Faley, R. H. (1988). Some Determinants of Student Performance in the First College-Level Financial Accounting Course. *The Accounting Review*, 63(1), 137-147.
- Etter, E. R., Burmeister, S. L., & Elder, R. J. (2000). Improving student performance and retention via supplemental instruction. *Journal of Accounting Education*, 18(4), 355-368.
- Ewer, S., Greer, O., Bridges, W., & Lewis, B. (2002). Class length and student performance: An extended study. [journal article]. *International Advances in Economic Research*, 8(2), 160-168.
- Farley, A. A., & Ramsay, A. L. (1988). Student Performance in First Year Tertiary Accounting Courses and Its Relationship to Secondary Accounting Education. *Accounting & Finance*, 28(1), 29-44.
- Ferreira, A., & Santoso, A. (2008). Do students' perceptions matter? A study of the effect of students' perceptions on academic performance. *Accounting & Finance*, 48(2), 209-231.
- Gammie, E., Jones, P., & Robertson-Millar, C. (2003). Accountancy undergraduate performance: a statistical model. *Accounting Education*, 12(1), 63-78.
- Gammie, E., Paver, B., Gammie, B., & Duncan, F. (2003). Gender differences in accounting education: an undergraduate exploration. *Accounting Education*, 12(2), 177-196.
- Garkaz, M., Banimahd, B., & Esmaeili, H. (2011). Factors Affecting Accounting Students' Performance: The Case Of Students At The Islamic Azad University. *Procedia - Social and Behavioral Sciences*, 29, 122-128.
- Gelardi, A. M. G., & Emby, C. E. N. (2005). The "Shock" Factor in Students' Performance in Accounting Examinations. *Advances in Accounting*, 21, 219-231.
- Gist, W. E., Goedde, H., & Ward, B. H. (1996). The influence of mathematical skills and other factors on minority student performance in principles of accounting. *Issues in Accounting Education*, 11(1), 49-60.
- Grace, E. V., & Black, T. G. (2011). Performance predictors in a graduate accounting program *Advances in accounting education: Teaching and curriculum innovations* (pp. 117-138): Emerald Group Publishing Limited.
- Gracia, L., & Jenkins, E. (2002). An exploration of student failure on an undergraduate accounting programme of study. *Accounting Education*, 11(1), 93-107.
- Gracia, L., & Jenkins, E. (2003). A quantitative exploration of student performance on an undergraduate accounting programme of study. *Accounting Education*, 12(1), 15-32.
- Grimm, S. D. (2015). Learning Logs: Incorporating Writing-to-Learn Assignments into Accounting Courses. *Issues in Accounting Education*, 30(2), 79-104.
- Gujarati, D. (2004). *Basic Econometrics* (Fourth ed.) New York: The McGraw-Hill Companies.
- Gul, F. A., & Cheong Fong, S. C. (1993). Predicting success for introductory accounting students: some further Hong Kong evidence. *Accounting Education*, 2(1), 33-42.
- Guney, Y. (2009). Exogenous and Endogenous Factors Influencing Students' Performance in Undergraduate Accounting Modules. *Accounting Education*, 18(1), 51-73.
- Hartnett, N., Römcke, J., & Yap, C. (2004). Student performance in tertiary-level accounting: an international student focus. *Accounting & Finance*, 44(2), 163-185.
- Ingram, R. W., & Petersen, R. J. (1987). An Evaluation of AICPA Tests for Predicting the Performance of Accounting Majors. *The Accounting Review*, 62(1), 215-223.
- Jackling, B., & Anderson, A. (1998). Study mode, general ability and performance in accounting: a research note. *Accounting Education*, 7(1), 65-73.
- Jones, S. H., & Wright, M. (2011). Effect of cognitive style on performance in introductory financial accounting and the decision to major in accounting. *Global Perspectives on Accounting Education*, 8, 7-26.
- Keef, S. P. (1988). Preparation for a first level university accounting course: The experience in New Zealand. *Journal of Accounting Education*, 6(2), 293-307.
- Keef, S. P., & Hooper, K. C. (1991). Prior accounting education and performance in a first-level university course in New Zealand. *Accounting & Finance*, 31(1), 85-91.
- Keef, S. P., & Roush, M. L. (1997). New Zealand evidence on the performance of accounting students: race, gender and self-concept. *Issues in Accounting Education*, 12(2), 315-330.
- Koh, M. Y., & Koh, H. C. (1999). The determinants of performance in an accountancy degree programme. *Accounting Education*, 8(1), 13-29.
- Lane, A., & Porch, M. (2002). The impact of background factors on the performance of nonspecialist undergraduate students on accounting modules - a longitudinal study: a research note. *Accounting Education*, 11(1), 109-118.
- Lee, D. S.-Y. (1999). Strength of High School Accounting Qualification and Student Performance in University-Level Introductory Accounting Courses in Hong Kong. *Journal of Education for Business*, 74(5), 301-306.
- Lipe, M. G. (1989). Further evidence on the performance of female versus male accounting students. *Issues in Accounting Education*, 4(1), 144-152.

- Lynn, B., Shehata, M., & White, L. (1994). The Effects of Secondary School Accounting Education on University Accounting Performance—A Canadian Experience\*. *Contemporary Accounting Research*, 10(2), 737-758.
- Mitchell, F. (1985). School Accounting Qualifications and Student Performance in First Level University Accounting Examinations. *Accounting and Business Research*, 15(58), 81-86.
- Mitchell, F. (1988). High school accounting and student performance in the first level university accounting course: A UK study. *Journal of Accounting Education*, 6(2), 279-291.
- Mutchler, J. F., Turner, J. H., & Williams, D. D. (1986). The performance of female versus male accounting students. *Issues in Accounting Education*, 2(1), 103-111.
- Naser, K., & Peel, M. J. (1998). An exploratory study of the impact of intervening variables on student performance in a principles of accounting course. *Accounting Education*, 7(3), 209-223.
- Nourayi, M. M., & Cherry, A. A. (1993). Accounting Students' Performance and Personality Types. *Journal of Education for Business*, 69(2), 111-115.
- Papageorgiou, K., & Abdel, H. (2014). Factors contributing toward student performance in a distance education accounting degree. *Meditari Accountancy Research*, 22(2), 211-223.
- Rankin, M., Silvester, M., Vallely, M., & Wyatt, A. (2003). An analysis of the implications of diversity for students' first level accounting performance. *Accounting & Finance*, 43(3), 365-393.
- Rebele, J. E., Apostolou, B. A., Buckless, F. A., Hassell, J. M., Paquette, L. R., & Stout, D. E. (1998). Accounting education literature review (1991-1997), part II: students, educational technology, assessment and faculty issues. *Journal of Accounting Education*, 16(2), 179-245.
- Richardson, J. T. E., Morgan, A., & Woodley, A. (1999). Approaches to studying in distance education. *Higher Education*, 37(1), 23-55.
- Rohde, F. H., & Kavanagh, M. (1996). Performance in first year university accounting: Quantifying the advantage of secondary school accounting. *Accounting & Finance*, 36(2), 275-285.
- Rotenstein, A., Davis, H. Z., & Tatum, L. (2009). Early Birds versus Just-in-Timers: The effect of procrastination on academic performance of accounting students. *Journal of Accounting Education*, 27(4), 223-232.
- Schroeder, N. W. (1986). Previous accounting education and college-level accounting exam performance. *Issues in Accounting Education*, 1(1), 37-47.
- Shoorvarzy, M. R., & Kholousi, A. (2011). Identification of the Effective Factors on the Success in Financial Management Course. *World Applied Sciences Journal*, 15(4), 562-568.
- Siagian, F. T., & Khan, M. (2016). The impact of a participant-based accounting cycle course on student performance in Intermediate Financial Accounting I. *Journal of Education for Business*, 91(6), 311-317.
- Tho, L. M. (1994). Some evidence on the determinants of student performance in the University of Malaya introductory accounting course. *Accounting Education*, 3(4), 331-340.
- Tyson, T. (1989). Grade performance in introductory accounting courses: Why female students outperform males. *Issues in Accounting Education*, 4(1), 153-160.
- Xiang, M., & Gruber, R. (2012). Student Performance in their First Postsecondary Accounting Course: Does High School Accounting Matter? *Advances in Accounting Education: Teaching and Curriculum Innovations* (pp. 297-311).
- Yu, D. D. (2011). How Much Do Study Habits, Skills, and Attitudes Affect Student Performance in Introductory College Accounting Courses? *New Horizons in Education*, 59(3), 1-15.