

## **Determinants of students' academic performance in four selected accounting courses at University of Zimbabwe**

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### **ABSTRACT**

The study seeks to establish scientific evidence of the factors affecting academic performance for first year accounting students using four selected courses at the University of Zimbabwe. It uses Ordinary Least Squares method to analyse the influence of personal and family background on performance. The findings show that variables age gender, enrolment status and access to internet are important in explaining academic performance of accounting students at the University of Zimbabwe.

Keywords: academic performance, age, gender, enrolment status

## INTRODUCTION

### Background to the Study

Students that enter the University of Zimbabwe (UZ) come from a wide range of social backgrounds. These give them different life experiences, different educational opportunities, expectations, needs and varied academic potential (Fraser and Killen 2003). At the point when the study is conducted there are some significant changes in the traditional environment for the students in the Department of Accountancy at the University of Zimbabwe, following the aftermath of 2008 economic instability there are some changes in the learning environment for the students (UZ Student Affairs Committee Meeting Minutes 2 of 2010). The Department of Accountancy has had a tradition of enrolling fulltime students only. However since 2010 there has been a shift to accommodate people in the accounting profession that are working and want to get a university degree and a part-time programme was introduced. (Memorandum of Understanding between University of Zimbabwe and Institute of Chartered Accountancy in Zimbabwe 30 October 2009). The difference between the conventional status and the part-time status is in the entry qualifications, times when lectures are conducted and length of program. Course content and degree structure are the same (University of Zimbabwe 2010:293-294). There are two groups of students who make up the part-time student group. There are those who were granted special entry because they hold Higher National Diploma in Accounting or Business Studies or other professional qualifications like Institute of Chartered Secretaries and Administrators (CIS), Association of Chartered Certified Accountants (ACCA) and those who have Advanced level but are working so cannot attend full-time classes. (University of Zimbabwe Faculty of Commerce Regulations amended 2010:16). It must also be noted that students enrolled for both part-time and fulltime were from middle class and poor families. Access to government funding for students is restricted to proven needy cases only (University of Zimbabwe-Government of Zimbabwe Higher Education Cadetship Policy 2009).

### Theoretical Framework

Hoskins, Newstead and Denis (1997) conducted study on students at University of Plymouth, and found out that variables; age, gender, prior qualifications and discipline studied have an effect on their performance as cited in Cheesman, Simpson and Wint (2006:10). This paper studies the role of individual characteristics age, gender, some family socio-economic background variables like available resources including residential space and pre-university aspects like type of school attended and whether Accounting was ever done at secondary school level and enrolment status on the student's academic performance using the University of Zimbabwe, department of accountancy as a case study.

A student's age was established to be associated with degree performance by Barrow, Reilly and Woodfield (2009) where it is found that that mature students marginally achieve better degree outcomes. Win and Miller (2005) said that previous instructional quality received by student, the student's house hold environment, and education of parents are factors that influence the academic performance of students hence the variables member in family with a degree and type of school attended. Jacobs (2002) made a study which established that finances affect university students' performance.

Evans and Farley (1998) showed that grades in high school mathematics and Accounting are positively and significantly related to student performance, therefore in this study entry qualifications and exposure to accounting as a subject were taken as determinants of success. Dayioglu and Turut-Asik (2004) and Cheeseman *et al* (2006) found that for

Caribbean students females outperformed their male counterparts. Gender was thus considered as a variable affecting students' performance and success at university.

Cook and Evans (2000) studied students from disadvantaged groups and established that they have poor academic performance. In this study a big household is taken as a proxy for disadvantage. The bigger the household size the more strained the resources so owning texts books becomes restricted as indicated in the UNDP 2012 report Sub Saharan Africa has the highest proportion of people living on less than one American dollar a day (UNDP 2012). Bae (2006:112) found that in schools where majority of the parents had white collar jobs students had more motivation when compared to students from schools where the majority of parents had no white collar jobs. Having a member with a degree in immediate family implies a formal job if not white collar hence the variable was considered to be important.

Jeong, (2005) quoted in Bae (2006:112) found out that use of internet and the contents viewed have an effect on students' academic performance hence access to internet was taken as an important variable. Teachers have been shown to have an important influence on students' academic achievement and they also play a crucial role in educational attainment (Afe 2001), therefore reference is made to access to lecturer outside class as a measure of a resources available to students. Enrolment status also matters for the part-time students need exert themselves more than full-time because most of them are employed and are family people and face challenges juggling academic and other responsibilities (Bourner & Race, 1990, Simmons, Ada, Musoba and Geun Chung 2005:14.

## **RESEARCH QUESTIONS**

The research questions posed were whether the variables age, gender, enrolment status entry qualifications, access to internet and other resources including finances have any influence on academic performance in the department of accountancy.

## **RESEARCH METHODS**

This study uses a dataset from a class of first year students who entered University of Zimbabwe (UZ) in the 2010/2011 academic year. These data give the full profiles of the students which are generated by the UZ examinations and records departments. The profiles show the actual marks that these students received in four of the selected courses in which they were enrolled over first semester. All the courses considered are taken to be equal in their value and are quality controlled according to University of Zimbabwe established and organised procedures. A short questionnaire was administered to collect additional data on students' demographic information and other variables that are likely to influence performance such as available resources, entry qualification, age and gender. The questionnaires which were administered were 241 and of these 211 were returned. For this analysis, 200 responses were used corresponding to the students who gave requisite information on all the variables used for the paper.

## **DATA ANALYSIS**

Descriptive analysis covers means, proportions and minimum and maximum. Multi-co linearity test to relationships between explanatory variables was done. The test did not show any variables that are related for there was none with a cut off point value of 0.7. The ordinary least squares (OLS) method was used to determine factors influencing academic performance.

## Dependent Variables

Average mark attained by first year students in four first semester courses.

## Independent variables

Table 1 (Appendix 1) shows the independent variables and Table 2 (Appendix 2) shows descriptive statistics. The average score is expressed in terms of percentage. In the sample the average grade ranged between 45% and 82% around a mean value of 68%. Demographic variables family member with a degree, household size, own room, own text book and access to internet after hours are proxies of the resources family background offered the student. On the other hand, the variables denied access to UZ resources and access to lecturer outside classes are proxies of resources offered by the institution. When students have not paid full fees they cannot obtain student identity cards and without a student identity card they cannot enter campus. This would be the reason why resources cannot be accessed, therefore being denied access to resources also points to difficulties in raising the needed fees. Government sponsorship through cadetship is the dummy for availability of financial resources. Cadetship refers to a program whereby the government pays for tuition only for disadvantaged students who, on completion are then obliged to serve the government in different capacities or pay back the sums paid in support. This option is not available to part-time students. Forty nine percent of students in the sample get government sponsorship all of whom are full-time since the cadetship programme is only open to full-time students.

Type of school attended and entry qualifications represent the pre-university experience and propensity to succeed at college studies. Eighty five percent of the students in have 'A' levels as their entry qualifications. The enrolment status shows the implementation pathway the student embarked on in pursuit of the degree whether full-time or part-time. The proportion of full-time students to part-time students is 67%:33% reflecting a higher percentage of full-time students. The average age in years for the sample is 22 and the youngest learner is 18 and the oldest is 46. The proportion of males to females is 64:36 signifying a higher percentage of males.

## Results of Regression Analysis

Table 3 (Appendix 3) shows the results of Regression Analysis. The average grade obtained in the four selected courses is dependent variable. Levels of significance are marked with asterisks where 5% significant coefficients are marked with two asterisks while those at 10% are marked with one asterisk. The chosen level of significance acceptable was 10%. Table 3 shows  $R^2$  at 25%. Looking at the p values there are 4 variables that are significant, one at 5% and 3 at 10%.

Variables gender, age, enrolment status and access to internet explained 25% of the variation in the dependent "average mark" variable. The variables found to be statistically significant for this study were gender where the gender gap was in favour of male students, student enrolment status where full-time students outperformed part-time students, access to internet with students with access to internet after hours more likely to score higher average marks than those with no access and age, with younger students outperforming their older counterparts.

It is observed that students who are younger perform significantly better than older students. It is interesting to note that the University of Zimbabwe has 'mature entry' where it is assumed that with age that is 25 years and older people are wiser and mature and upon passing a University entrance test can enter into university degree programmes. Yet the

results of this study concur with Sakho's study where it was found that the average grades for students had an inverse relationship with age (Sakho 2003:10)

<http://www.hec.unil.ch/modmacro/recueil/Sakho.pdf>.

Contrary to Caribbean students, male students in this study have a better chance of achieving higher grades. Although there is no scientific basis for it the University of Zimbabwe has an implied but not written policy which based on affirmative action policy in Zimbabwe the department always goes one or two points lower for female students' university entry qualifications into the programme. This has now been confirmed by the study that the gender gap is in favour of male students.

There is a significant difference in the academic performance of students with internet access and those without. Those that access internet even after hours have a better chance than their counterparts to score higher grades. This is in agreement with other findings (Tella 2007). Enrolment status was found to be a significant variable. Conventional or full time students are more likely to score higher average marks than their part time counterparts. Contrary to some American studies where students who work and are at college part time perform better than their full-time counterparts (Light, R. J. 2001, Nonis, S. A., & Wright, D. 2003). This study finds agreement in Caribbean studies where it is reported that part time students are less likely to score higher grades than full time students.

## CONCLUSIONS

This research paper, set out to establish determinants of academic performance in the department of accountancy, University of Zimbabwe has come up with results that both consistent and contradictory with the literature studied. The results show that the gender gap for UZ is in favour of males. Other conclusions from this paper are the findings that full-time students perform better than part-time students. Access to internet is found to be positively associated with academic performance. Age was found to be an influential variable with older students needing more time and effort. The results indicate that if a student is older, is part time, is female and has no access to internet after hours that student is in trouble and has to exert herself extra hard. An area of study from this research would be to carry out this study again say four years later and use the same cohort and determine how they have persisted or finally graduated or dropped out.

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**Appendices**

**Appendix 1**

**Table 1: Independent Variables**

| VARIABLE             | DISCRIPTION  |
|----------------------|--|
| Age                  | Age of student Number in years   |
| Gender               | Gender of student Male=1, female=0   |
| Household size       | Number of people student lives with Number   |
| Degree               | If there is anyone with a degree in family of student Yes = 1, No = 0                                    |
| Available Resources  |  |
| Own room             | If student has own room Yes = 1, No = 0  |
| Access to internet   | If student has access to internet after hours Yes = 1, No = 0  |
| Own text books       | If student has text books in three of courses Yes = 1, No = 0  |
| Denied Access        | If student has ever been barred from using resources of university Yes = 1, No = 0                       |
| Teacher access       | If student has access to three of lecturers outside lecture time Yes = 1, No = 0                         |
| Cadetship            | If student is on government sponsorship Yes = 1, No = 0  |
| Entry Qualifications |  |
| Entry                | Entry qualification of student whether it is 'A' Level only Yes = 1, No = 0                              |
| Status               | Enrolment status of student whether conventional or part-time Yes (conventional) = 1, No (part-time) = 0 |
| School type          | If student attended former group A school Yes = 1, No = 0  |
| Accounts             | If student did accounts at secondary school Yes = 1, No = 0  |

**Appendix 2**

**Table 2: Descriptive statistics**

| Variable                                 | Observations | Mean    | Std. Dev. | Min | Max |
|--|--------------|---------|-----------|-----|-----|
| Age                                      | 200          | 22.3950 | 5.0574    | 18  | 46  |
| Gender                                   | 200          | 0.6400  | 0.4812    | 0   | 1   |
| Household size                           | 200          | 5.2398  | 7.6760    | 1   | 10  |
| Family member with degree                | 200          | 0.5550  | 0.4982    | 0   | 1   |
| Own room                                 | 200          | 0.5427  | 0.4994    | 0   | 1   |
| Access to internet after hours           | 200          | 0.2450  | 0.4312    | 0   | 1   |
| Own textbook                             | 200          | 0.2312  | 0.4226    | 0   | 1   |
| Denied access to UZ resources            | 200          | 0.1800  | 0.3852    | 0   | 1   |
| Access to lecturer outside class         | 200          | 0.5400  | 0.4996    | 0   | 1   |
| Government sponsorship through cadetship | 200          | 0.4900  | 0.5012    | 0   | 1   |
| Entry qualifications                     | 200          | 0.8550  | 0.3530    | 0   | 1   |
| Status of enrolment                      | 200          | 0.6768  | 0.4689    | 0   | 1   |
| Type of school attended                  | 200          | 0.2020  | 0.4025    | 0   | 1   |
| Average                                  | 200          | 68.0741 | 5.8579    | 45  | 82  |



Appendix 3

Table 3 : Regression Analysis Results

| Average                                  | Coefficient | Standard Error. | T     | P> t    | 95% Confidence Interval |         |
|--|-------------|-----------------|-------|---------|-------------------------|---------|
| Age                                      | -0.3301     | 0.1122          | -2.94 | 0.004** | -0.5515                 | -0.1086 |
| Gender                                   | 2.0753      | 0.8376          | 2.48  | 0.014*  | 0.4224                  | 3.7282  |
| Household size                           | -0.0287     | 0.0496          | -0.58 | 0.564   | -0.1265                 | 0.0692  |
| Family member with a degree              | 0.6052      | 0.7976          | 0.76  | 0.449   | -0.9688                 | 2.1792  |
| Own room                                 | -0.4355     | 0.8472          | -0.51 | 0.608   | -2.1074                 | 1.2363  |
| Access to internet after hours           | 2.0561      | 1.0948          | 1.88  | 0.062*  | -0.1044                 | 4.2167  |
| Own textbook                             | 0.5702      | 1.0406          | 0.55  | 0.584   | -1.4832                 | 2.6237  |
| Been denied access to UZ resources       | -1.2194     | 1.0253          | -1.19 | 0.236   | -3.2428                 | 0.8040  |
| Access to lecturer outside class         | 0.8841      | 0.7787          | 1.14  | 0.258   | -0.6526                 | 2.4208  |
| Government sponsorship through cadetship | 0.4887      | 0.9876          | 0.49  | 0.621   | -1.4602                 | 2.4375  |
| Entry qualifications                     | 0.9306      | 1.3875          | 0.67  | 0.503   | -1.8074                 | 3.6687  |
| Status of enrolment                      | 3.0728      | 1.2290          | 2.5   | 0.013*  | 0.6475                  | 5.4981  |
| Type of school attended                  | -1.1969     | 0.9867          | -1.21 | 0.227   | -3.1441                 | 0.7502  |
| _constant                                | 70.5584     | 3.4843          | 20.25 | 0       | 63.6826                 | 77.4343 |

N = 200 R<sup>2</sup> = 25%

Level of Significance \*\* = 5% \* = 10%