

# **Determinants of Student Performance at University: Reflections from the Caribbean**

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# **Determinants of Student Performance at University: Reflections from the Caribbean**

## **Abstract**

The study reported upon in this paper examines the performance of a sample of 900 students who graduated in 2004 from the Mona Campus of the University of the West Indies, the largest university in the Anglophone Caribbean region. This analysis of student performance is conducted against the background of considerable changes in the tertiary educational systems, around the world, in general, and in Jamaica and the Caribbean in particular. These changes are requiring universities to place much greater emphasis on self-study, and on ensuring that they are performing efficiently in all areas, including the area of student transformation, which is an area of performance linked, at least in part, to academic results. The study, relying on statistical analysis, identified five factors as important determinants of student performance: gender, which is the area of most intense study in the Caribbean in relation to student performance; enrolment status; faculty of study; on versus off campus residence; and whether students did or did not apply for financial assistance. The paper concludes with implications from the study's findings.

## **Introduction**

The obvious importance of knowledge creation to development has long placed universities at the centre of the efforts of governments to increase the rate at which their economies grow. Around the world, as the processes of globalization and technological revolution create greater demands on firms and nation states to compete more effectively, countries and firms are turning to universities to assist in the development of innovative capacity.

A recent ranking of the world's top universities (Economist, 2005) which indicates that seventeen of the top twenty universities are located in what many regard as

the World's most innovative country, the United States, is not likely to be lost on policy makers around the world. Relatedly, in 2005 the United Nations Centre for Trade and Development (UNCTAD) devoted its Annual Investment Report to the topic of Transnational Corporations and the Internationalization of R&D, and developed an Innovation Capability Index, which includes key elements of University activity (namely, per-capita R&D personnel, patents and scientific publications and tertiary enrolment as a percentage of the applicable age group). UNCTAD indicates that 74% of the variation in per-capita income across countries is accounted for by its innovation capability index. (United Nations, 2005).

Against this background, universities have come under increasing performance scrutiny as they are expected to play a critical role in national development efforts. Governments in countries such as Australia and the United Kingdom have over the last decade developed national management systems geared toward increasing the productivity of their universities. Although it is also clear that enhanced educational enrolment is unlikely to assist in development efforts without an appropriate and stable macro-framework (Wint, 2003), universities, through their research and policy advocacy roles, are also well positioned to influence the development of appropriate enabling frameworks.

This trend toward placing pressure on universities for increased productivity has also found appeal in developing countries. Several of these countries are liberalizing their systems of higher education in an effort to increase their tertiary student enrolment ratios. These countries are also placing national university systems, which have typically been funded by the public purse and subject to limited, if any, competition, under greater

levels of competitive pressure, with the goal of generating higher levels of operational performance from the universities.

It is against the background of these developments that the study reported upon in this paper should be placed. This study derives from a research project conducted by a Strategic Transformation Team (STT) established by the Mona Campus of the University of the West Indies (UWI). UWI is the largest and premier university in the Anglophone Caribbean. It was established in 1948, at the Mona Campus in Jamaica, as a college of the University of London. In 2005, UWI had campuses in three Caribbean countries: Jamaica, Barbados and Trinidad and Tobago, with a physical and programmatic presence in another twelve Caribbean countries (the UWI-twelve) whose governments provide financial support for the University. It is one of only two regional universities in the world, the other being the University of the South Pacific (USP), and it is larger than USP.

The formation of the STT represented an internal effort by UWI, Mona to transform and reposition the Campus against the background of dramatic changes taking place in the competitive and funding environment for higher education in the World and the Caribbean in general, and Jamaica, in particular, and as a mechanism for creating an implementation capacity to follow up an internally-driven analysis of the strategic challenges confronting the Campus (Hickling et al, 2003).

In seeking to catalyse improvements in performance at the UWI, Mona Campus, the STT has focused its catalytic activities in several areas: diversification of funding, including increased income-generating activity, enhancement of research performance, improvements in operational efficiency and productivity and student transformation.

These activities need to be informed by improvements in institutional research capacity, and it is in this regard, that the STT has spearheaded a process of conducting research in areas relevant to the performance dimensions identified above.

## **Student Transformation and Performance**

One of the most visible areas of performance of universities is the extent to which they are able to educate students who, on leaving their institutions, are transformed individuals capable of making a positive difference at national, regional or global levels. Clearly, part of the success of the educational process is measured in the quality of the student's academic performance while at the institution. It is in this context that the study reported upon in the remainder of this paper sought to ascertain the factors that were influential in determining the performance of students at UWI, Mona.

## **Factors Influencing Student Performance**

A significant component of the literature on student performance, particularly in the Caribbean, has focused upon the role played by gender. Much of this literature has addressed the differential performance, by gender, of students in the Caribbean high school system. One school of thought, best captured in the work of Errol Miller, has posited that the underachievement of males in the school system is linked to a historical process of male marginalisation. (Miller, 1986, 1991 & 1994).

Other scholars of Caribbean society adopt a differing perspective. In particular, Mark Figueroa argues that male underperformance in education is not a result of male marginalization. Instead, Figueroa suggests that it is the historical privileging of

Caribbean males that has led to the phenomenon of male educational under-performance. (Figueroa, 1996).

In essence male academic underperformance is rooted, Figueroa states, in male privilege and the manner in which this has been played out in relation to education at a time of social change within some institutions, values and norms. He recommends that the problem of male underperformance be attacked at three levels: at the home/community, school and workplace. Figueroa purports that, so long as academic disciplines continue to be defined as ‘male’ or ‘female’ boys will be at a disadvantage in choosing a career in keeping with their aptitude.

Figueroa (2000), using primary research and analysing data for secondary and tertiary level institutions, developed on his previous work. He asserted that, there were a number of complexities found in the explanation of the underachievement of the male gender. Male students, he explained, generally underachieve relative to females, with the gap widening at the higher levels. He further explains that the ‘mismatch’ between male gender identity and the educational system has grown. The situation is further exacerbated, he argues, by the persisting strong view that men should discipline boys, despite the fact that 42% of the household in Jamaica are female headed households. Compounding this issue is the fact that boys are less subject to community controls and would eventually acquire “street skills”, which, along with the role models they meet and the media, are detrimental to the schooling process.

Other scholars have also pointed to the extent to which gender is a critical factor in educational achievement. Evans, for example, identifies gendered home and school socialization as a key element explaining the underachievement of boys in the Jamaican

secondary school system (Evan, 1999). Bailey and Brown are not as convinced about the role of socialization and suggest, from the findings of their pilot study, that the critical factors accounting for male underperformance were financial constraints and home and community violence (Bailey and Brown, 1999).

While much of the focus of male academic under-performance has been on performance in the high school system, there has also been an attempt to examine the extent to which gender explains differences in performance in tertiary education. This has occurred both within the Caribbean region and outside. Extra-regionally, for example, Dayioglu and Turut-Asik (Dayioglu and Turut-Asik, 2004) attempted to determine whether there were any significant gender differences in academic performance among undergraduate students at the Middle East Technical University (METU) and if so what factors gave rise to those determinants.

Academic performance was hypothesized to be determined by a host of factors, which included individual and household characteristics such as student ability, motivation, the quality of secondary education obtained as well as the gender of the student. Dayioglu and Turut-Asik, asserted that childhood training and experience, differences in attitudes, parental and teacher expectations and behaviour, differences in courses pursued and biological differences are all instrumental in giving rise to gender differences in achievement.

The results from the study showed that the gender gap was in favour of male students as it related to university entrance scores. This was possibly due to the fact that female students were less successful in the placement exam so that they entered their respective departments with lower scores. Additionally, female students preferred less

competitive departments that admitted students with low scores. This might serve to further reduce their level of performance. In the final analysis, however, the researchers found that despite lower university entrance scores and under-representation in most departments, female undergraduate students outperformed their male counterparts while at college.

Research on gender differences in tertiary education within the Caribbean has focused primarily not on academic performance at the tertiary level, but rather on gender distribution by faculty, which is more tightly linked to pre-university academic performance. That is, the Caribbean-based research, to date, has tended to view performance in the context of gender differences in the proportion of students entering tertiary institutions and undertaking different courses of study (Bailey, 2002). Where attempts have been made to focus on performance, as reflected in quality of degree, these attempts have sought to identify the extent to which gender explains graduation rates.

Beyond gender, studies within the Caribbean have also attempted to identify other factors that impact on student performance, but they have used primarily qualitative research methods. Jacobs (Jacobs, 2002), for example, assessed the unique non-cognitive factors that are related to the successful academic performance of Grenadian students who matriculate into medical programmes of St. George's University in Grenada. The research concluded that non-cognitive factors do relate to the academic success and retention of Grenadian students in the medical programmes at St. George's University.

From the analysis, for example, it was evident that finances have a significant effect on the performance of students in the university. Grenadian students are predominantly supported by means of a scholarship. Financial problems, it was found,

led to stress and anxiety for students which in turn had a negative impact on the academic performance of some of these students.

In addition to the challenges associated with meeting tuition payments, many students do not have sufficient funds to afford adequate housing and to live in their preferred place of residence. Grenadian students who do not receive scholarships are unable to afford to live on campus. The study's conclusions suggested that once the housing of the Grenadian medical students improves, then their focus will be more directed towards academic study and less on distressing themselves about a place to live and complicated travel schedules.

Another factor the literature points to as having an impact on student performance is enrolment status, with part-time students requiring particular focus in their academic efforts because of the challenges they face in juggling academic and other responsibilities. (Bourner & Race, 1990).

Extra-regionally, other studies of the performance of students have identified the role of enrolment status, in addition to the effect of pre-college achievement or prior qualifications, family income, receipt of financial aid, age, gender, and discipline studied on academic performance.

In a study of the performance of first-generation college students in Indiana, for example, Simmons et al, identified being Asian, having a high family income, attending full time, receiving grant aid and completing advanced level classes in high school as having statistically significant effects on college persistence among first-generation college students. (Simmons et al, 2005).

Similarly, Hoskins et al, in their assessment of the performance of students studying at the University of Plymouth, identified the key variables affecting student performance to be age, gender, prior qualifications and discipline studied (Hoskins et al, 1997).

Although attention has been paid to factors affecting student performance in a Caribbean context, we are not aware of any study on academic performance in higher education in the Caribbean that seeks to assess student performance against a range of possible predictors, such as gender, age, matriculation status, residence, enrolment status and discipline studied, and that assesses this information systematically through use of a quantitative research methodology, although such studies have been conducted in other regions. (Simmons et al, 2005; Hoskins et al, 1997).

It is against the background of the strategic need to inform the variables driving student performance and the gaps in the Caribbean literature on this subject that the study reported upon below was conducted.

## **Research Questions and Methodology**

As pointed out earlier in this paper, the principal research question addressed in this study was what factors were influential in determining student performance at the main campus of the largest, and only regional, university in the Anglophone Caribbean, the University of the West Indies. Accordingly, the study involved an analysis of 900 randomly selected students who graduated from the Mona Campus of the University of the West Indies in November 2004.

A quantitative methodology was chosen as the most appropriate approach to be used in seeking to identify the factors likely to influence performance. Regression analyses were conducted with the dependent variable being the class of degree performance of the student, with the University of the West Indies distinguishing among four categories of degrees: first class honours; upper second class honours; lower second class honours and pass degrees (The Faculty of Medical Sciences also has four categories of degree performance but it uses a slightly different nomenclature from the other faculties).

Regression analyses were conducted on a stacked sample of male and female students and on male and female students separately, since the literature on educational performance, referred to earlier in this paper, had indicated that gender was likely to be a key variable in determining performance. The variables, informed by a review of the literature, were incorporated into the ordinary regression model, en bloc, using the “enter” method, the default method of variable entry. The gender variable was incorporated as a dichotomous, dummy variable.

## **Research Hypotheses**

Based significantly on the literature in this field, several factors were hypothesized to have an impact on student performance. Gender was one such factor, with females hypothesized to outperform males, as identified in the substantial literature in this area, commented upon in earlier sections of this paper. Others included enrolment status, with full-time students expected to outperform their part-time counterparts; matriculation status, with students with Advanced-Level qualifications expected to

outperform students with other forms of matriculation qualifications; residence, with students living on halls of residence expected to outperform commuting students; and age, with younger students, who were more likely to have advanced level matriculation, expected to outperform their older counterparts.

For one of the variables, financial assistance, it was difficult to hypothesize the direction because of two conflicting tendencies. At one level, students seeking financial assistance would be expected to be those from less financially stable backgrounds. This lack of financial stability would be expected to have a negative impact on the performance of these students as predicted in the literature suggesting that family income had a positive impact on student performance.

On the other hand, as the study by Jacobs on the performance of Grenadian students indicated (Jacobs 2002), students who did not have access to the requisite financial resources, which could come from financial assistance in the form of scholarships, would be likely to experience problems in their academic performance. This issue is particularly problematic because global research has demonstrated that even the most financially needy students are very wary about seeking financial assistance in the form of the traditional mortgage-type fixed interest loans that dominate within the Caribbean region, both because of problems associated with identifying guarantors and because of the risk-aversion linked to borrowing to acquire an education.

As pointed out by researchers, even if individuals are offered student loans as a mechanism for deferring the costs of financing their tertiary education, unless the loan programme is carefully structured, there may well still be an under-provision of education to such students because of the risk aversion of these individuals and the

uncertainty they feel with respect to their ability to earn the income required to repay their loans after graduation, if they graduate.

As Wigger and Weizsacker point out,

One should bear in mind that the individual returns to education are generally uncertain. The individual can neither be sure about finishing his education successfully nor about his future returns after a successful examination. In fact, educational returns display a very high variance as many students do not graduate, income differences between graduates are large, and even the risk to become unemployed exists. (Wigger & Weizsacker, 2001).

Levels of risk aversion are particularly high among students from low income households who are likely to have less family experience of tertiary education success, and fewer family contacts that make successful employment likely after graduation. (Albrecht & Ziderman, 1991). As noted by these authors:

Borrowing to finance higher education is unlike borrowing to purchase a house because, when people borrow to finance a degree they are not completely certain what they are purchasing (especially if their parents did not attend higher education). (Albrecht & Ziderman, 1991; p. 19).

This risk aversion is noted both in comparative studies, and the experiences of particular countries (Dickenson, 1996). On the basis of this risk aversion and the problems of identifying guarantors, it is quite possible that many students in the Caribbean who are desperately in need of financial assistance are unable to source this assistance and find that they have to work during their studies or eliminate critical expenditures on books and living expenses, which impact negatively on their ability to perform during their degree programmes. Fortunately, there are loan programmes, which have been introduced around the world, and recommended for the Caribbean, that can assist in alleviating the risk aversion of students (Broadbell et al, 2005).

Table 1 summarizes the research model employed, and the hypotheses that drove the study by identifying all independent variables and their accompanying hypothesized signs.

## **Descriptive Research Findings**

The data generated for the analysis provided information about the current composition of the UWI, Mona student body. In terms of degree performance, eighty-two percent of students in the sample received an honours degree (9% first; 39% upper-second and 34% lower-second), while the remaining 18% received a pass degree (see Table 2).

Table 2 also provides a gendered distribution of degree performance. Note that while 82% of the total sample received honours degrees, 85.5% of the females received honours degrees, while 70.7% of the males received honours degrees. Even more strikingly, 52.9% of the females received first or upper second class honours degrees, while the equivalent ratio among males was 32%. This descriptive finding supports the results of the statistical analysis, and accords with the literature within and outside the Caribbean, on the importance of gender in explaining differences in student performance at the University level.

In relation to qualifications at entry, 45% of the sample had two or more A-Levels, 18% had a teachers college diploma and 18% entered through assessment by the matriculation board, while the remaining 19% entered with other forms of matriculation. In terms of age, 52% of the sample graduated at the age of 24 or younger. 18% were

between 24 and 29, 19% between 29 and 40, and the remaining 11% were between 40 and 58 at graduation.

Twenty-five percent of the sample was male. Forty-six percent of the students in the sample came to Mona from high schools, 33% came from teachers colleges and community colleges, while the remaining 21% came from other tertiary institutions. In terms of residence, 75% of the students in the sample entered Mona from the Kingston Metropolitan Area (which now includes, Portmore and Spanish Town).

Sixty-three percent of the students in the sample enrolled full-time. Thirty-five percent of the students in the sample resided on hall. Approximately, Forty-seven percent of the students in the sample came from the Faculty of Social Sciences; 33% from Humanities and Education; 13% from Pure and Applied Sciences; and 7% from the Faculty of Medical Sciences. Finally, only 17% of these students applied for financial assistance, whether from the Mona Campus or the Students' Loan Bureau.

## **Results of Regression Analyses**

Three regression analyses were conducted. An analysis was conducted on the entire sample of 900 students. Additionally, separate analyses were conducted on the male and female students in the sample, in keeping with the literature identifying gender as one of the most powerful determinants of academic performance and based upon the descriptive findings as presented in Table 2.

### **Results of Regression on Stacked Sample of Female and Male Students**

For the combined male and female sample of students, the independent variables identified above explained 24% of the variation in the dependent "class of degree"

variable. Of these explanatory variables, five were statistically significant at the 95% confidence level. (See Table 3).

The statistically significant variables were **gender**, with females more likely than males to receive honours degrees; **faculty**, with students from medical sciences less likely than students from other faculties to receive honours degrees; **student enrolment status**, with full-time students more likely than part-time students to receive honours degrees; **financial assistance**, with students who applied for financial assistance more likely to receive honours degrees than their peers who did not apply; and **residence**, with students living off-campus more likely to receive honours degrees than students living in halls of residence.

#### **Results of Regression on Sample of Male Students**

For the sample of male students, the independent variables explained 27% of the variation in the dependent variable. Of these explanatory variables, four were statistically significant at the 95% confidence level. (See Table 4).

The statistically significant variables were **last school attended** with male students who came to UWI from community colleges being less likely to obtain honours degrees than those who came from other institutions; **faculty**, with male medical science students less likely to receive honours degrees than males from other faculties; **student enrolment status**, with full time male students more likely to receive honours degrees; and **financial assistance**, with male students who applied for financial assistance more likely to receive honours degrees.

## **Results of Regression on Sample of Female Students**

For the sample of female students, the independent variables explained 22% of the variation in the dependent variable. Of these explanatory variables, three were statistically significant at the 95% confidence level. (See Table 5).

The statistically significant variables were **faculty**, with female medical science students less likely to receive honours degrees than females from other faculties; **student enrolment status**, with full time female students more likely to receive honours degrees; and **financial assistance**, with female students who applied for financial assistance more likely to receive honours degrees.

## **Conclusion**

This research project, aimed at identifying factors that influenced performance of students at the UWI, has generated results that are quite consistent with the extant literature in this field. It shows, quite clearly, for example, that the gender differences in performance that apply across the pre-university educational system within the Caribbean have extended to the University-level system in a manner that goes beyond the typical performance classification. The typical classification assesses the distribution of the student body across faculties, and graduation rates, by gender. The findings on gender differences in performance at the UWI also correspond to gender differences in performance at universities in other regions of the world.

Other conclusions from this study also find ready resonance in a global literature. The finding, for example, that students who apply for financial assistance outperform those who do not seems at odds with the expectation that students who do not apply for

financial assistance should perform well because of their supposedly more stable financial situation. Yet this finding is quite compatible with a global literature that recognizes the extent to which poor students are averse to seeking out, or unable to meet the requirements of, financial assistance programmes, and so choose not to apply, even while their academic performance suffers because of their inability to meet basic needs. (Albrecht & Zideman, 1991).

The finding that part-time students are less likely to perform as well as full-time students is not particularly surprising given the broader set of challenges that part-time students experience in seeking to gain their education. Indeed, as noted earlier in this paper, this had led some researchers to focus particular attention on the performance of part-time students.(Bouner and Race, 1990) The performance challenges facing part-time students are likely to be particularly severe in the context of the Caribbean where the structures that are routinely provided for part-time students in countries with more experience in educating non-traditional university students, such as highly flexible time-tabling, are not yet readily available across disciplines at the University of the West Indies.

This study's findings with respect to age and matriculation status not being statistically significant are somewhat counter-intuitive. Pre-university performance and the type of school attended are predicted by the literature to have an impact on student performance. In this study, this result only proved significant in the case of male students coming to UWI from community colleges, rather than high schools. It is not clear why this result applied to male students only.

In terms of age, an inverse relationship was predicted between age and student performance, which was not apparent in the statistical findings. This finding, however, is consistent with some of the literature in this field. In the University of Plymouth study, for example, mature students outperformed younger students in class of degree (Hoskins, et al, 1997).

Further, in the Plymouth study, there was an interesting interaction between age, performance, and matriculation status. While, as in the UWI study, there was little overall difference between the overall performance of students with Advanced Level qualifications and those with other qualifications, in the younger age groups, degree performance was better among students with traditional Advanced Level qualifications. On the other hand, the reverse pattern obtained with students aged over 25 years. The researchers conducting the study at Plymouth speculated that younger students with non-traditional qualifications may be those who struggled within the school system, while more mature students were likely to bring with them a range of qualities which were not well represented in Advanced Level qualifications (Hoskins et al, 1997). It is quite likely that a similar result applies within the UWI system.

Possibly the most surprising result is that students who live on the residence halls of the University of the West Indies Mona Campus are outperformed by their peers who commute. This finding is certainly at variance with the results of Jacob's study on academic performance of Grenadian students at St. Georges University in Grenada. Yet, this result is less surprising to observers of residential life at the University of the West Indies, to the extent that concerns have been raised about the "anti-intellectual" quality of

residential life and the degree to which social events seem to dominate the residential life calendar.

Clearly additional research is required in these and other areas. While the statistical analysis identified several variables as statistically significant, these variables, collectively, left much of the variance in student performance unexplained, suggesting that other factors also play critical roles in explaining differences in student performance. These factors are unlikely to emerge from quantitative studies, but these studies do provide an important foundation on which more qualitative studies of differences in student performance can be conducted.

The data from this study, however, do make it clear that those individuals with the responsibility to ensure that universities in the Caribbean region perform at the highest possible levels need to work with student bodies towards maximizing the academic benefits of residential life, while putting in place support structures for part-time students.

On the critical issue of gender, the multifaceted approach to responding to the problem of male underperformance across all levels of the educational system, including university education, which is advocated by Figueroa, needs to be given priority. This prioritization needs to recognize not only the importance of male academic performance to the overall performance of universities, but the significant correlation between male academic performance and economic growth, as most sharply identified in the work of Barro (Barro, 1997). His research, on comparative growth rates among countries, demonstrated that the extent to which males were able to obtain schooling to secondary and higher levels was a key factor in explaining differences in economic growth rates across countries. .

**Table 1**

**Variables Employed in Regression Analyses**

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<b>Dependent Variable</b>	<b>Class of Degree</b>
<u>Independent Variables</u>	<u>Hypothesized Signs</u>
Gender	Female - positive
Age	Negative
Area of Residence	Indeterminate
Last School Attended	High School – positive
Matriculation Qualifications	Advanced Level – positive
Financial Assistance	Indeterminate
Enrolment Status	Full time – positive
Faculty	Indeterminate
Residential Status	Campus – positive

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Data Source: UWI, Mona Registry

**Table 2**  
**Gendered Distribution of Degree Performance**

		Class of Degree				
		Pass	Lower Second	Upper Second	First	Total
<b>Male</b>	Number	66	87	53	19	225
	%	29.3	38.7	23.6	8.4	100
<b>Female</b>	Number	98	220	297	60	675
	%	14.5	32.6	44	8.9	100
<b>Total</b>	Number	164	307	350	79	900
	%	18	34	39	9	100

Source: UWI, Mona Registry

**Table 3****Results of Regression on Stacked Sample of Male and Female Students**

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<b>Variable</b>	<b>Standardized Beta Coefficient</b>	<b>t statistic</b>	<b>Significance</b>
Reside – hall	-.084	-2.065	.039*
Diploma	.176	1.662	.097
Alevel	.139	1.061	.289
Readmit	.056	1.288	.198
No A-level	.048	.689	.491
MB assess	.120	1.293	.196
Comcollege	-.072	-1.534	.125
Teachcollege	-.046	-.901	.368
HighSchool	-.079	-1.590	.112
MedScience	-.396	-8.490	.000*
Pure/Applied	.012	.310	.757
SocialScience	.016	.372	.710
Financial Assis	.117	3.380	.001*
KingstonMet	-.050	-1.227	.220
Fulltime	.254	6.488	.000*
Age	-.023	-.478	.633
Male	1.131	-3.851	.000*

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\*: Statistically significant at the 95% confidence level.

Dependent Variable: class of degree;  $R^2$  (Adj.) = 24.4%.

**Table 4**  
**Results of Regression on Sample of Male Students**

<b>Variable</b>	<b>Standardized Beta Coefficient</b>	<b>t statistic</b>	<b>Significance</b>
Reside – hall	-.121	-1.536	.126
Diploma	-.055	-.370	.712
Alevel	-.024	-.110	.912
Readmit	.083	.847	.398
No A-level	-.039	-.275	.784
MB assess	.010	.068	.946
Comcollege	-.166	-2.025	.044*
Teachcollege	-.034	-.366	.715
HighSchool	-.079	-.853	.395
MedScience	-.539	-5.592	.000*
Pure/Applied	.057	.616	.539
SocialScience	-.132	-1.362	.175
Financial Assis	.206	3.058	.003*
KingstonMet	.047	.613	.541
Fulltime	.214	2.594	.010*
Age	.095	1.015	.312

\*: Statistically significant at the 95% confidence level.  
 Dependent Variable: class of degree;  $R^2$  (Adj.) = 27%.

**Table 5****Results of Regression on Sample of Female Students**


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<b>Variable</b>	<b>Standardized Beta Coefficient</b>	<b>t statistic</b>	<b>Significance</b>
Reside – hall	-.064	-1.314	.189
Diploma	.267	1.905	.057
Alevel	.246	1.477	.140
Readmit	-.042	-.916	.360
No A-level	.094	1.152	.250
MB assess	.182	1.521	.129
Comcollege	-.031	-.531	.595
Teachcollege	-.006	-.086	.932
HighSchool	-.068	-1.100	.272
MedScience	-.341	-6.124	.000*
Pure/Applied	-.034	.743	.458
SocialScience	.044	.919	.358
Financial Assis	.089	2.167	.031*
KingstonMet	-.068	-1.368	.172
Fulltime	.264	5.745	.000*
Age	-.054	-.939	.348

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\*: Statistically significant at the 95% confidence level.  
 Dependent Variable: class of degree;  $R^2$  (Adj.) = 22%.

## References

- Albrecht Douglas & Adrian Ziderman, *Deferred Cost Recovery for Higher Education: Student Loan Programs in Developing Countries* (Washington D.C: World Bank Discussion Paper, 1991).
- Bailey, Barbara, "The Feminization of Tertiary Education" *YouWE Quality Education Forum*, UWI, No. 8, May 2002.
- \_\_\_\_\_ and Monica Brown, "Schooling and Masculinity: Boys' Perceptions of the School Experience," *Caribbean Journal of Education*, Vol. 21, No.1, 1999.
- Barro, Robert J., *Determinants of Economic Growth: A Cross-Country Empirical Study* (Cambridge, MA: MIT Press, 1997.)
- Bourner, Tom and Phile Race. *How to Win as a Part-time Student: A Study Skills Guide*. (London: Inform Publishing Services Ltd, 1990.)
- Broadbell, Rosemarie, Peter John Gordon, Donald Simpson, Alvin G. Wint, *Financing Tertiary Education in Jamaica*. Report to Minister of Finance, Jamaica., 2005.
- Dayioglu, M and T. Serap. "Gender Differences in Academic Performance in a Large Public University in Turkey". ERC Working Papers in economics 04/17 (December 2004) <http://www.erc.metu.edu.tr/menu/series04/0417.pdf>
- Dickenson, Joy, *Toward a Strategy for the Improvement of Student Financing at the University of the West Indies*. (unpublished Masters Project Report, 1996.)
- Economist, "A Survey of Higher Education," Sep. 2005.
- Evans, Hyacinth, "The Construction of Gender and Achievement in Secondary Schools in Jamaica," *Caribbean Journal of Education*, Vol. 21, No. 1, April, 1999.
- Figueroa, Mark. "Making sense of male experience: The Case of Academic Underachievement in the English Speaking Caribbean". *IDS Bulletin* Vol. 31# 2 (2000).
- Figueroa, Mark. "Male Privileging and Male Academic Performance in Jamaica". In: The Construction of a Caribbean Masculinity: Towards a Research Agenda-A Symposium. The University of the West Indies Center for Gender and Development Studies, St. Augustine, 12 January 1996.
- Hickling, Frederick, Ishenkumba Kahwa, Trevor Munroe, Verene Shepherd, Alvin Wint, *Strategic Challenges Confronting UWI, Mona: An Analysis and Response* (University of the West Indies, Mona, 2003.)

- Hoskins, Sherria L, Newstead, Stephen E & Dennis, Ian (1997) “Degree Performance as a function of age, gender, prior qualifications and discipline studied,” *Assessment & Evaluation in Higher Education*, 22, 3.
- Jacobs, Glen. “Non-Academic Factors Affecting the Academic Success of Grenadian Students at St. George’s University (SGU)”  
<http://www.uwichill.edu.bb/bnccde/grenada/conference/papers/jacobsg.htm> (10 February 2002).
- Miller, Errol, *Marginalization of the Black Male: Insights from the Development of the Teaching Profession* (Mona, Jamaica: Institute of Social and Economic Research, UWI, 1986).
- \_\_\_\_\_, *Marginalization of the Black Male: Insights from the Development of the Teaching Profession, 2<sup>nd</sup> Edition* (Mona, Jamaica: Canoe Press, 1994).
- \_\_\_\_\_, *Men at Risk* (Kingston, Jamaica Publishing House, 1991.)
- Simmons, Ada B., Glenda D. Musoba, Choong Geun Chung, “Persistence Among First-Generation College Students in Indiana: The Impact of Precollege Preparation, College Experiences, and Financial Aid,” *IPAS Research Report #05-01*, April 2005.
- United Nations, *World Investment Report 2005: Transnational Corporations and the Internationalization of R&D*. (New York and Geneva, United Nations, 2005).
- Wigger & Weizsacker, *Risk, Resources and Education: Public versus Private Financing of Higher Education* (Washington D.C.: IMF Staff Papers, 2001.)
- Wint, Alvin G. *Competitiveness in Small Developing Economies: Insights from the Caribbean* (Kingston, Jamaica: UWI Press, 2003).