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An Assessment of Undergraduate Business Program Admission and Retention Standards

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BACKGROUND

What purposes are undergraduate admission/retention standards for business programs designed to serve? At least two reasons for imposing such standards can be identified: quality assurance and resource rationing. AACSB International recognizes in its standards the importance of admission policies designed to support the achievement of the school's mission, and it further states that admission standards are an influential factor in determining the character of a school. The AACSB indicates that a variety of information can be used in making admission decisions and includes "scholastic achievement, leadership experience, standardized exams, work record, and other indices." The AACSB also has a requirement that "the school has academic standards and retention practices that produce high quality graduates" (AACSB, 2003). While there are no specific procedures established by the AACSB as to how schools are to implement an admission policy, the accrediting body is clearly supportive of the use of admission and/or retention standards for the purpose of quality assurance.

Budget shortfalls at public universities are also having an impact on admission criteria. The University of Arizona has limited business school enrollments and has considered a cap on enrollment in its management information systems major due to a lack of sufficient funding to hire additional instructors in the area (Martinez, 1999). The California university system has raised its admission standards due to cash shortfalls (Toch and Slafsky, 1991) and, according to one report, a number of schools in the Southwest are currently becoming "more stringent in their admission policies" in order to manage increasing demand (Associated Press, 2004). These examples suggest that schools may use admission and retention standards as a means of rationing seats in a program when they are unable to obtain sufficient resources to accommodate demand.

There has been substantial research on how specific admission criteria relate to later success in both graduate and undergraduate business programs. These studies have looked at demographic characteristics of students such as their age, sex, race, years of work experience, GMAT scores and undergraduate GPA measures as predictors of student performance in graduate programs (Adams and Hancock, 2000; Ahmadi, Raiszadeh and Helms, 1997; Wright and Palmer, 1997 Yang and Lu, 2001). Two studies have looked rather directly at the issue of defining effective admission criteria for undergraduate business programs. One study focused on admission to accounting programs and found that GPA at 45 semester hours in conjunction with other variables proved to be a strong predictor of success (Clark and Sweeney, 1985). A study at the University of Idaho used a composite GPA for five sophomore level courses required for admission to the business college and found a strong predictive value for this variable (Pharr, Bailey, and Dangerfield, 1993). It also found that performance in these sophomore-level required courses to be a stronger predictor of performance in the business major than ACT and SAT scores achieved prior to university admission. A more recent study at the same school revisited these requirements after the school had instituted an integrated curriculum. This study found some justification for broadening the set of courses used in their school's admission criteria in order to better match their integrated curriculum (Lawrence and Pharr, 2003).

While the studies cited above looked at specific proposed admission criteria for business programs, there are no available studies that systematically examine the extent and type of admission strategies used in undergraduate business programs. Which types of schools impose business-school specific admission or retention standards? Can students enter into the major as a freshman? Are there multiple stages for entry to a major? Do schools require minimum university GPA scores to be considered for admission? Do schools assess performance in a core set of classes as a part of their program admission standard and, if so, what courses are included in this core? These and other questions are the focus of this paper.

METHODOLOGY AND DATA COLLECTION

There are 412 accredited U.S. schools or colleges of business on the AACSB accreditation list. A systematic sampling procedure was used to gather data from every fourth school on that list. If for some reason the school or college chosen did not have material posted on the Member Profile section of the AACSB web site or did not have an undergraduate program, the school immediately below the selected one was used. In the rare case when the second school or college also did not have data, the school or college above the first one was used. The sampling procedure resulted in a sample size of 103 school or colleges of business for investigation. Data on each school for this study were collected from: the member profile section for domestic undergraduate schools or colleges of business on the AACSB accreditation list, the school or college's web site, and the school or college catalog.

School web sites and on-line catalog information were used to determine the type of criteria used by these sample schools to determine which students are admitted and retained in their undergraduate business major programs. This information was coded by the authors of the paper in a standard format after initial coding samples were used to ensure consistency in data collection.

Table 1 shows the distribution of the sample business schools pertaining to several measures of the size of the school and its budget. Clearly our sample schools show wide variation in size – from 14 to nearly 200 faculty members and from just over one million to over 67 million dollars in operating budget. The final variable in Table 1, Operating budget per Faculty, is derived by dividing the business school's operating budget by its number of FTE faculty (both figures are from data reported to AACSB). This variable can be thought of as a measure of funding adequacy. Other things being equal, we would expect schools with a high operating budget per faculty to be better able to accommodate enrollment growth than schools with a low operating budget per faculty, since it would be difficult for the latter schools to acquire additional qualified faculty in a competitive labor market.

Table 1
Distribution of Size and Budget Characteristics of Sample Schools

	Mean	Minimum	Median	Maximum
Number of Graduate Degrees	161.2	0	108	897
Number of Undergraduate Degrees	473.4	66	417	1882
Number of FTE Faculty	67.2	14	57	187
Operating Budget	\$11,866,704	\$1,100,000	\$8,409,349	\$67,205,000
Operating Budget per Faculty	\$162,931	\$63,947	\$143,467	\$511,667

Table 2 provides some additional demographic characteristics of our sample business schools. Over 70 percent of the schools in our sample are public institutions and nearly two thirds of the sample schools are located in urban areas. Only about 20 percent of the sample schools have doctoral programs in business and just less than half of them have separate accounting accreditation. The final variable in Table 2 presents a measure of the selectivity of university admissions that was taken from US News and World Report's [2004] rankings. Five selectivity levels ranging from least selective to most selective are used. Nearly 60 percent of the sample schools are at the middle level of selective. Nearly all of the remaining schools, almost a third of the total sample, are at the higher selectivity ratings of more selective or most selective. Arguably, business schools in universities that are highly selective would have less need to impose separate admission standards than business schools in less selective universities.

Table 2

Demographic Characteristics of Sample Schools

FUNDING SOURCE	Number	Percentage
Private	29	28.2%
Public	74	71.8%
DOCTORAL PROGRAM		
No	82	79.6%
Yes	21	20.4%
ACCREDITED IN ACCOUNTING		
No	57	55.3%
Yes	46	44.7%
URBAN		
No	37	35.9%
Yes	66	64.1%
U.S. News & World Report Selectivity Rating		
Not Selective	1	1.0%
Less Selective	8	7.8%
Selective	61	59.2%
More Selective	28	27.2%
Most Selective	5	4.9%

MEASURING ADMISSION AND RETENTION STANDARDS

The major thrust of this study is the attempt to identify the extent and nature of admission and retention standards that business schools have used to control enrollment in the professional business program and to determine the reasons for such standards. In examining the criteria used by various schools, we found a number of schools that have no distinct admission or retention standard for the school (or college) of business. These schools simply accept the university admission standard and allow all accepted students to enter the business major and allow all students making satisfactory progress (as defined by university standards) to remain in the business major. On the other hand, there are a number of schools that do not accept entering freshmen into the professional business program (Business Major) and have formal criteria based upon a student's performance at the university level that must be met in order for the student to be accepted into the professional business program. Still another set of schools allows students to be admitted as freshmen, but imposes an admission standard that is higher than that required for the university and/or imposes some form of retention criteria for students to remain in the business major.

Based upon the discussion above we have divided the schools in our sample into four admission/retention categories. These alternative categories are:

1. *Freshman University: Freshman admission based on University admission with no further restrictions*
2. *Freshman Enhanced: Freshman admission based on distinct and more stringent requirements than those for University admission (with or without further retention criteria)*
3. *Freshman with Retention Standard: Freshman Admission based on University admission, but with criteria for continuation in the major*
4. *Program Admission: No Freshman Admission. Professional Program Admission based upon performance criteria.*

Schools in the second category apply standards based upon standardized test scores, high school grades, and sometimes application letters and related criteria. To be placed in this category the school must have a defined quantitative standard that is higher than that for University admission or must have stated that admission of freshmen is on a competitive basis and is controlled by the business school. These schools may or may not also impose retention criteria similar to those described below. Schools in the third category allow anyone accepted to the university into the business major, but require that students meet a performance standard to remain a business major. The performance standards used are often very similar to the standards for professional program admission described for category four. Category four schools require a formal process for admission to the professional business program and generally base their admission decisions on University GPA; GPA in, or successful completion of, a set of prescribed courses (often referred to as the lower division core); or a combination of these two criteria. It is sometimes difficult to distinguish between simply having a required set of prerequisite courses and having an admission standard for the professional program. For the purposes of this study, performance in a set of prescribed courses is considered to be an admission or retention standard only if a GPA of at least 2.0 is required for those courses.

Table 3 presents the distribution of schools across the admission criteria categories described above. Approximately one third of the schools apply no admission or retention criteria beyond the requirements of the university, another third use a formal professional program admission standard before allowing students into the business major and the remaining third allow freshman admission, but with a higher standard for admission or with a retention standard.

Table 3
Distribution of Schools by Type of Admission/Retention Standard

	Number	Percentage
Freshman University	35	34.0%
Freshman Enhanced	13	12.6%
Freshman with Retention Standard	20	19.4%
Professional Program Admission	35	34.0%

FACTORS AFFECTING THE USE OF ADMISSION/RETENTION STANDARDS

Two bases for business school admission/retention standards were identified in our earlier discussion: quality assurance and rationing. The quality assurance rationale argues that admission and or retention standards are needed to ensure that students in the professional business program are of sufficient quality. If business school admission/retention standards are imposed for quality assurance reasons, we might expect that business schools in universities with highly selective admission standards would find less need to impose additional standards. To test for this effect, we divided our sample of schools into two categories based upon their selectivity level: schools with a selectivity rating of selective or less and schools with a selectivity rating of more selective or higher. Table 4 shows the distribution of admission criteria across these two selectivity categories. Chi-square test results do suggest that the selectivity level significantly influences the type of admission standard. As the quality assurance rationale would suggest, business schools in more selective universities are more likely to admit students to the business school with no separate admission or retention standard and are substantially less likely to impose a formal professional program admission process than business schools in less selective universities.

Table 4
Selectivity Level and the Distribution of Admission/Retention Criteria

	Selectivity Level*			
	Selective or <		More Selective or >	
1. Freshman University	20	28.6%	15	45.5%
2. Freshman Enhanced	7	10.0%	6	18.2%
3. Freshman with Retention Standard	13	18.6%	7	21.2%
4. Professional Program Admission	30	42.9%	5	15.2%
TOTAL	70	100.0%	33	100.0%

NOTE: Chi-Square significance level for differences in admission criteria by selectivity level = .0417, Cramer's V = .2825

The second rationale for business school admission/retention standards suggests that schools which are unable to secure the resources needed to meet enrollment demand are likely to impose admission or retention standards in order to ration available space in their programs. To test for this effect, we examine the impact of operating budget per faculty (our best available measure of a school's ability to secure resources to accommodate expansion) on the type of admission/retention standard. Schools are divided into two groups based upon their operating budget per faculty: those at or below the median, and those above the median. Table 5 indicates that the budget per faculty measure did significantly influence (Chi-Square significant at .0347 level) the type of admission/retention standard. Consistent with the rationing hypothesis, schools with a higher budget per faculty were more likely to accept all students admitted to the university and less likely to impose a formal professional program admission process.

Other demographic characteristics might also have an impact on the type of admission criteria used by our sample schools. Table 6 presents the distribution of private and public schools across the four admission/retention criteria types identified above. There is a substantial difference between the criteria used by private versus public schools and this is reflected in the highly significant Chi-Square test statistic (.0018). Since the private schools in our sample tend to be both more selective and better funded (higher operating budget per faculty) than the public schools, this is not a surprising result. However the strength of the differences here is striking. Almost two-thirds of the private schools allow freshman admission to the business school based on university admission with no additional criteria, while less than a quarter of public schools take this approach.

Table 5
Budget per Faculty and the Distribution of Admission/Retention Criteria

	Budget per Faculty			
	< = Median		> Median	
Freshman University	12	24.0%	21	42.0%
Freshman Enhanced	4	8.0%	9	18.0%
Freshman with Retention Standard	12	24.0%	8	16.0%
Professional Program Admission	22	44.0%	12	24.0%
TOTAL	50	100.0%	50	100.0%

NOTE: Chi-Square significance level for differences in admission criteria by business college spending per faculty member = .0347, Cramer's V = .2904

Table 6
Funding Source and the Distribution of Admission/Retention Criteria

	Private		Public	
Freshman University	18	62.1%	17	23.0%
Freshman Enhanced	3	10.3%	10	13.5%
Freshman with Retention Standard	4	13.8%	16	21.6%
Professional Program Admission	4	13.8%	31	41.9%
TOTAL	29	100.0%	74	100.0%

NOTE: Chi-Square for differences in admission criteria by funding source = .0018,
Cramer's V = .3821

The impacts of several other demographic characteristics of schools (urban versus rural location, program size, accreditation in accounting, and presence of a doctoral program in business) on the type of admission/retention criteria were also examined. With the exception of having a doctoral program in business, none of these demographic variables appears to affect the type of admission/retention criteria used. The presence of a doctoral program did seem to be associated with a higher probability of accepting business majors as freshmen. However, the number of schools with doctoral programs in business in our sample is quite small, 21 schools.

CHARACTERISTICS OF PROGRAM ADMISSION AND RETENTION STANDARDS

Over 60 percent of the schools in our sample impose some form of retention or formal admission standard on students entering the professional business program. This includes the 35 schools in category 4, the 20 schools in category 3, and 8 of the 13 schools in category 2 of the admission/retention categories. The programs that allow freshman admissions but require students to meet criteria to continue as business majors utilize standards that are very similar to programs that apply a formal professional program admission standard. In fact, preliminary statistical analyses showed no significant differences between the standards used for formal program admission and those used for retention. Thus admission and retention standards are combined in the remaining analyses.

As Table 7 indicates, if we look at both retention and professional program admission standards, over 60 percent of the schools impose some form of performance standard in all university classes and/or a set of prescribed courses. Most commonly, both overall performance and performance in a specific set of core classes are considered in a school's admission/retention decision. Almost as frequently, admission/retention decisions are based solely upon performance in a set of core classes. In the remainder of this section we will look at descriptive statistics relating to these performance standards.

Table 7
Professional Program Admission / Retention Standard

	Number	Pct.
Based on University GPA Performance	9	14.3%
Based on Performance in Core Classes	24	38.1%
Based upon Core Class and University GPA	30	47.6%

Table 8 presents the distribution of required University GPA levels among schools requiring students to meet such a requirement. The most common required levels are in the range from 2.0 through 2.75 with a smattering of higher levels.

Table 8

Distribution of Required University GPA Level

Required GPA Level	Count	Percentage
2.00 - 2.24	12	30.8%
2.25 - 2.49	9	23.1%
2.50 – 2.74	14	35.9%
2.75 – 2.99	1	2.6%
3.00 – 3.24	2	5.1%
3.25-2.49	1	2.6%

Table 9 presents a similar set of required grade distributions for sets of prescribed lower division (LD) courses. The strong clustering at the level of 2.0 is in part due to a number of schools requiring a “C” or better in each of the courses in the set. If that was the only requirement listed, the required GPA was shown as 2.0, although, no Ds in any of the classes is undoubtedly a higher standard than just a 2.0 GPA. About 60% of the schools with a lower division core admission standard (33 of them) do require a C or better in each course. In most cases, these GPA levels are stated as criteria for *consideration* for admission. Note that very few schools have a standard for this criterion that is 2.75 or above.

Table 9

Distribution of Required LD Core Class GPA Level

Required GPA Level	Count	Percentage
2.00 - 2.24	38	70.3%
2.25 - 2.49	6	11.1%
2.50 – 2.74	6	11.1%
2.75 – 2.99	2	3.7%
3.00 – 3.24	2	3.7%

It is also of interest to note which courses are most frequently included in the set of lower division courses used in program admission or retention standards. Table 10 lists these courses in order from the most to the least frequently required. It should be noted that classes are included in this list only if they are used in the admission/retention criteria. English and math classes are almost universally required, but grades in these classes are not always included in the admission /retention GPA.

Table 10
**Courses Most Frequently Included in Lower Division Core
 Admission/Retention Standards**

COURSE	NUMBER	PERCENTAGE
Microeconomics	52	96.3%
Macroeconomics	52	96.3%
Financial Accounting	52	96.3%
Managerial Accounting	45	83.3%
Statistics 1	44	81.5%
Computer or Mgt. Info Systems	39	72.2%
English 1	25	46.3%
College Algebra / Finite Math	25	46.3%
Business Calculus	24	44.4%
Business Law	21	38.9%
English 2	19	35.2%
Oral Communications	13	24.1%
Statistics 2	12	22.2%
Introduction to Business	11	20.4%
Calculus 1	9	16.7%
Business Communications	7	13.0%
Other Courses	7	13.0%

Table 11 shows the distribution of the number of required lower division classes included in admission and retention standards. Most schools appear to include from 6 to 10 classes in these standards with 6 being the single most frequent number. Schools do vary somewhat with respect to the timing of admission decisions and the breadth of the set of classes included in the core. It was not possible to systematically capture these differences, but it is fair to say that programs with a smaller number of required classes tended to be less likely to include English and communication classes in their set of core requirements. It is also fair to say that a number of the schools with 6 or fewer required core classes before acceptance are designed to admit students after 2 to 3 semesters, while those with 8 or more required classes would rarely admit students prior to the end of their fourth semester.

Table 11
**Number of Lower Division Required Classes in
 Admission / Retention Standards**

Number of Classes	Schools Requiring	
	Number	Percentage
4	2	3.7%
5	3	5.6%
6	16	29.6%
7	6	11.1%
8	10	18.5%
9	8	14.8%
10	6	11.1%
11	3	5.6%

SUMMARY

This study presents results from an analysis of admission and retention criteria of accredited business schools. A variety of types of admission and retention standards is used. Schools allowing freshman admission in some cases applied no standard beyond that required for university admission, while others required a higher standard for freshmen admitted to the business school and still others allowed admission of all accepted students, but used retention standards to assure the quality of their graduates. Schools not allowing freshman admission to the business major almost always used some combination of the students overall GPA and/or their grades in a set of lower division core courses as their primary admission criteria. These same criteria were also frequently used as retention standards by schools allowing freshman admission to the business school.

The results of this study suggest that quality assurance concerns and rationing of limited available resources play a role in schools' decisions to impose admission or retention standards. In addition, there is a strong difference between the standards applied by publicly funded schools and those of private schools. Private schools were much less likely to have formal program admissions processes separate from university admission. This may reflect a greater ability of private schools to secure resources needed to effectively teach all qualified applicants or it may reflect stronger pressure for private schools to ensure sufficient overall university enrollment.

The study also presents descriptive statistics about the nature of admission and retention standards that should be useful to schools interested in initiating or modifying such standards. Standards based upon performance in a prescribed set of courses (often combined with an overall university GPA standard) are clearly the most frequently used type of admission or retention standard. When core performance is used, schools most commonly include from 6 to 9 courses in the core. Often students are required to earn at least a "C" in each core course and schools frequently impose GPA requirements on the set of core courses in the range from 2.0 up to 2.75 with a smattering of schools imposing higher standards.

While answering a number of questions about the types of admission and retention standards commonly used in business schools, this study raises a number of additional questions. How do faculty, students, and, perhaps most importantly recruiting companies, perceive admission and retention standards? Do these perceptions vary across the differing types of admission and retention standards identified in this study? To what extent are admission and retention standards influenced by a school's accreditation status? These are all important questions which should be addressed in future research.

REFERENCES

- AACSB International. (2003). Accreditation Standards. Retrieved from <http://www.aacsb.edu/accreditation/standards.asp>, 31.
- Adams, A., T. Hancock (2000). Work Experience as a Predictor of MBA Performance. *College Student Journal*, 34(2), 211-216.
- Ahmadi, M., F. Raiszadeh, M. Helms (1997). An Examination of Admission Criteria for the MBA Programs: A Case Study. *Education*, 117, 540-546.
- Associated Press (2004). Colleges raise Standards to Combat Flood of Applicants. *Associated Press state and Local Wire*, April 18, 2004. Retrieved from Lesis-Nexis.com.
- Clark, R.L., R. B. Sweeney (1985). Admission to Accounting Programs: Using a Discriminant Model as a Classification Procedure. *The Accounting Review*, Vol. LX(3), 508-518.
- Lawrence, J. and Pharr, S. (2003). "Evolution of Admission Standards in Response to Curriculum Integration," *Quality Assurance in Education: An International Perspective*, Vol. 11, No. 4, 12p.
- Martinez, P. (1999). Strong Demand Nearly Caps UA Business Major. *The Arizona Daily Star*, October, 10, 1B.
- Pharr, S., J. Bailey, B. Dangerfield, (1993). Admission/Continuance Standards as Predictors of Academic Performance of Business Students. *Journal of Education for Business*, (November/December), 69-74.
- Toch, T., T.. Slafsky (1991). The Great College Tumble, *U.S. News & World Report*, June 3, Vol. 110 Issue 21, 50.
- U.S. News and World Report (2004). *Ultimate College Directory 2004 Edition*, 1908 pages.
- Wright, R., J. Palmer (1997). Examining Performance Predictors for Differentially Successful MBA Students. *College Student Journal*. 31, 276-81.
- Yang, B., D. Lu (2001). Predicting Academic Performance In Management education: An Empirical Investigation of MBA Success. *Journal of Education for Business*, 77(1), 15-20.