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DEMAND AND SUPPLY OF DOCTORATES IN BUSINESS:  
TIME TO BE BEARISH OR BULLISH?

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## DEMAND AND SUPPLY OF DOCTORATES IN BUSINESS:

### TIME TO BE BEARISH OR BULLISH?

"The U.S. educational system has loosed a flood of PhDs which the market cannot absorb. And the situation is getting worse, not better." "Cant't Somebody Turn the Damned Thing Off?" [1] "The Enrollment Roller Coaster: Colleges fear the Bid Dip" [2]. "Rising Enrollments Make Market Bullish for B-School Profit" [3].

Headlines and quotations such as the above have been common recently in the press. Do they really reflect the academic market for new doctorates in business? Is it a time to be bearish on graduate education in business? Or is it more rational to be bullish on B-schools? The objective of this paper is to take a closer look at some current facts and then offer some judgments. Specifically, the paper will: (a) consider enrollment trends at the BBA, MBA, and doctorage levels between 1977-78 and 1984-85; (b) estimate the net new faculty additions during the same time frame; and (c) project the supply of new doctorates in business administration through 1984-85. All of the data refer only to American Assembly of Collegiate Schools (AACSB) accredited programs. Some data on AACSB nonaccredited programs have been collected but will not be discussed here.

The conclusions are based upon the results of a mail survey, supplemented in some cases, by personal and telephone interviews of the 197 accredited AACSB programs in the spring and summer of 1978 [4]. Useable questionnaires came from 136 of the schools (69 percent). The schools which responded accounted for over 76 percent of the faculty and a similar percentage of the enrollments in accredited programs in 1976-77.

## FINDINGS IN BRIEF

The data generally support a more bullish position on enrollments in B-schools and on the demand for new doctorates in business than the above quotations suggest. In fact, it is expected that BBA enrollments will rise by more than 10 percent nationwide; MBA growth is forecasted to reach beyond 24 percent; and doctoral output should rise approximately 15 percent. Overall growth in enrollments in all three degree programs should increase by almost 13 percent from 1977-78 through 1984-85 [5]. New faculty additions, including replacements for death and retirement, should show a 37 percent rise during that time. One must also keep in mind that if the data for the nonaccredited programs were included for the BBA and MBA degrees, the growth figures for these two programs undoubtedly would be much higher. The reason for this is that many of the programs still seeking AACSB accreditation approval are showing enrollment gains at an almost uncontrolled rate. The demand for faculty in such schools is strong and it should continue to reflect the pressure from increasing enrollment for the near term.

Taken alone, demographic data would suggest that generally college enrollments may peak in the mid-1980s and then enter a period of decline that will continue into the 1990s [6]. However, it is unlikely that the data hold for business schools for a number of economic reasons. For example, there has been an obvious and significant shift in student attitudes toward a more career-oriented higher education which has caused enrollments in BBA and MBA programs to increase at a time when the enrollments in many other disciplines are either in a steady-state situation or are actually declining. Growth in both programs, plus a strong surge in

continuing education for management, should be positive signs of the demand for new doctorates in business. Moreover, there have been dramatic gains in the number of women entering all three business degree programs. Most importantly, the market has demonstrated an almost insatiable demand for graduates of business programs. In fact, the relatively high salaries now being offered for MBAs have probably reduced the number of highly qualified applicants to some doctoral programs. If these economic factors continue to persist in the 1980s, they are likely to at least offset the demographic influences. This means that the output of doctorates in business may not keep pace with the growth of the other two programs.

It would appear that the demand and supply of doctorates in business might reach an equilibrium point by 1983, if only the accredited AACSB programs are considered. If the growth of the nonaccredited programs and also the nonacademic demand for doctorates in business are taken into consideration, equilibrium in the market place or even a surplus of doctorates might not occur for the next decade. It has been estimated by some authorities that approximately 15-17 percent of the output of doctorates in business administration are employed in nonacademic positions. Other academic disciplines are hoping to achieve a similar placement of PhDs in nonteaching employment in order to avoid or reduce huge surpluses [7].

Table 1

ENROLLMENT PROJECTIONS, NET NEW FACULTY ADDITIONS,  
1984-85/1977-78, BY AACSB REGIONS  
(percentage change)

AACSB REGION	TOTAL	ENROLLMENT			NET NEW FACULTY ADDITIONS
		UNDERGRADUATE	MASTERS	DOCTORATES	
New England	+ 4.4	+ 1.1	+11.9	+20.3	+27.9
Middle Atlantic	+ 7.7	- 2.7	+ 4.8	+13.3	+25.6
Mid-Continent	+15.4	+12.5	+28.6	+12.6	+34.4
Southern	+13.2	+10.4	+27.7	+25.6	+32.2
Midwest	+16.0	+15.3	+21.0	- 7.9	+33.0
Southwestern	+12.1	+ 7.2	+47.6	+26.3	+37.8
Western	+16.7	+13.4	+33.7	+ 6.0	+53.0
OVERALL	+12.8	+10.1	+24.1	+15.3	+36.7

N.B.: These data represent 69.0 percent of accredited undergraduate and/or masters programs responding to a survey of AACSB schools. At the time of the survey, spring-summer, 1978, 136 accredited schools out of 197 returned their questionnaires. The respondents accounted for over 76 percent of the faculty in the accredited programs.

Table 1 summarizes the enrollment projections for accredited AACSB programs by region. While the percentage changes might be impressive, and at least overall they are positive, one must keep in mind that they do represent an eight-year growth pattern. Annual changes, not shown here, are much more modest. In fact, in some programs a period of steady state is forecasted. In the Middle Atlantic Region an actual decrease (-2.7 percent) in undergraduate enrollment is predicted. In the Midwest Region a decline of almost

8 percent is forecasted in doctoral enrollments at the same time these schools expect to increase their faculty size by one-third. Consequently, we note rather pronounced differences in these expectations among degree programs in the various sections of the country.

One fact seems especially significant and clear. While there are large differences in expected enrollment patterns by regions, all areas of the country seem to be planning to expand with additions to faculty. The lowest rate of growth reported is for an increase of more than 25 percent over 1977-78 levels, while the Western Region expects to hire enough new doctorates to increase the size of their faculties by over 50 percent. Apparently many schools have some catching up to do in terms of staffing needs. Enrollment increases of recent years in business administration must not have been met with an adequate growth in budgetary faculty positions. Indications at a recent regional meeting of AACSB deans suggest that the situation probably is at least as critical in the nonaccredited programs [8].

#### DEMAND AND SUPPLY FOR NEW DOCTORATES IN BUSINESS

Academic demand largely is determined by enrollments, and the approximately 37 percent increase in faculty additions translates into around 5,400 positions (accredited schools only). With an annual graduation of nearly 1,200 doctorates in business it is easy to see that the accredited programs alone would absorb such a supply in about 4-1/2 years. However, this projection does not take into account the demand of the numerous nonaccredited programs and the relatively consistent nonacademic demand for business doctorates.

On balance, if all of the above trends persist, it is difficult to visualize an employment situation for business doctorates that would be as "soft" as that which currently exists in the humanities and some social and "hard" sciences. At the very worst, it seems that demand and supply of new doctorates in business should be in market equilibrium in the next decade. More realistically it appears that shortages might even persist in such functional areas as accounting, finance, management information systems, and possibly marketing. Currently, business policy (management) also seems to be an area with a shortfall of doctorates. Whether the demand will continue in this area is not clear at this time.

While at least ten new doctoral programs are expected to appear soon, it does appear likely that the annual output of the almost 100 existing programs will be absorbed readily in the near term. Table 2 project doctoral output in business through 1985-86. The National Center for Education Statistics (NCES) forecasts approximately a 50 percent increase in output by 1985-85 over current levels [9]. Even with the new doctoral programs producing a few graduates in those years, it does not appear likely that the annual production of business doctorates will reach 1,800 [10]. If it does reach this level in the early 1980s and continues, a surplus probably would develop in the field.

TABLE 2

## NCES PROJECTIONS OF DOCTORAL DEGREES TO BE AWARDED

1978-79 through 1985-86

Year	Projected Doctorates in Business	Percentage Change from previous year
1978-79	1,270	+1.6
1979-80	1,290	+1.6
1980-81	1,360	+5.4
1981-82	1,500	+10.3
1982-83	1,620	+8.0
1983-84	1,700	+4.9
1984-85	1,800	+5.9
1985-86	1,870	+3.3
Total	12,400	

Source: U.S. Department of Health, Education, and Welfare; National Center for Education Statistics (NCES), Projections of Education Statistics to 1985-86, Washington, D.C., 1977.

Perhaps the NESC projections will be realized; however, one should recognize that such projections usually are based on the master's degree output. Doctoral output in business is quite different from that in other fields. In 1975-76 business schools produced 14.7 percent of all bachelor's degrees and 12.9 percent of all master's, but only 3.1 percent of all doctorates in the U.S. The significance of these data lies in their sharp contrast with the experience of the physical sciences (an area reported to have a



surplus of PhDs). This field produced only 2.3 percent of all bachelor's degrees in 1975-76 and only 1.9 percent of all master's but 10.2 percent of all PhDs. The facts are that while the PhD in most disciplines follows from quite naturally from the MA or MS, the doctorates in business are not necessarily geared to MBA production. Given the fact that the MBA enrollments are rising sharply some forecasters have anticipated a large flow into PhD and DBA programs from this source. That is just not likely to happen. The typical MBA degree has quite different objectives than most doctoral programs have and is not required for admission to most PhD programs. Also, most MBAs accept employment in nonacademic assignments and do not continue their graduate education. Hence, the NCES projections might be on the high side, in the judgment of some observers [11].

#### RELATED RESEARCH

Other related research includes a 1978 study by Harmon [12] which is more useful as an historical document for disciplines outside of business administration. The data are not directly related to the objectives of this paper. Cartter's study in 1976 [13], prepared for the Carnegie Commission on Higher Education, addressed itself to the problems of the business doctorate and the labor market. While Cartter suggests that some business disciplines will face a surplus in doctorates in the mid-1980s, he does expect that enrollments in both undergraduate and graduate business programs are likely to "hold up" better than in other fields. Cartter does recognize differences in labor markets and expects the surplus of doctorates in the humanities to continue in

the academic market, whereas he expects no surplus for computer science.

A useful and well-done article on the probable impact of the demographic data on business programs was written by Turner [14] in 1976. Turner points to the shifts in the attitudes of students toward a more career-oriented education that should help alleviate the downside pressures on undergraduate and graduate enrollments in business schools in the 1980s. In fact, he views it as possible that "...enrollments in business schools will continue to rise substantially into the mid-1980s and perhaps until 1990."

Undoubtedly, the most pessimistic report comes from the Bureau of Labor Statistics (BLS) of the U.S. Department of Labor [15]. The BLS predicts an oversupply of PhDs in their "Business and Commerce" category that is even more severe than that in the BLS "All Fields" classification. For the period 1974-85 the BLS projected: (a) 1,400 labor force separations (replacement demand); (b) only 200 growth positions for a total demand of 1,600; (c) a supply of doctorates for Business and Commerce for this period of 13,300; therefore, (d) a surplus of 11,700 doctorates. While the BLS annual output of business doctorates during this period averages a reasonable number of 1,200, the real quarrel might come with their demand estimates, which seem unusually conservative.

Another recent study dealing with this topic on a regional basis, containing much detail by disciplines within business, was done by Render, Wagoner, Bobo, and Corliss [16] of the University of New Orleans. Generally this is a more optimistic study, one that is extremely thorough and that should be of value to universities in

the South -- which have generally been a net importer of business doctorates.

#### SUMMARY AND IMPLICATIONS

In addition, the ratio of students to faculty in most business administration programs seems to be rising. This apparently is counter to the trend in many of the other disciplines. If this ratio continues to rise it could eventually bring about a stronger demand for additional business faculty than was anticipated by the respondents to this survey. Perhaps their estimates of new faculty additions reflect this anticipation; this however, is not clear in all cases from the data. Also, it is possible that a higher percentage of business doctorates will accept alternative career appointments in business and government. This would create additional upside pressures on the demand for new PhD's and DBA's. Conceivably, there might even be some job enrichment pressures in government and industry which would further stimulate the demand for the business doctorate. Finally, the large growth expected in MBA enrollments might cause an increase in the demand pressures for new faculty because typically graduate sections are smaller than undergraduate classes.

This writer would not be completely surprised to see that some plans for a new doctoral program in business have been scrapped, or even that some small, academically uneconomical programs without the proper academic "critical mass" might disappear. However, in my judgement the demand for the outstanding graduate from a market-tested program will always remain strong. High-quality doctoral programs probably will not have a "surplus" of graduates in

the foreseeable future. Consequently, a feeling of optimism prevails about the long-run outlook for accredited programs in business administration. We undoubtedly will have some near-term adjustments to make, but the challenges ahead are likely to be properly addressed by AACSB schools. Remember, some dire souls (whatever happened to them?) predicted in the 1950s that the Ford and Carnegie reports would be the death knell of the business schools. These reports only served to challenge the profession, and as a result the education for business changed for the better. The field became more professional, began to attract some of the most able students in the country, and became a dynamic intellectual area of study. It is the opinion of many of the current leaders in management education, and one that this writer agrees with, that the future looks bullish, indeed, for AACSB schools.

## REFERENCES

- [1] Wiegner, Kathleen, "Can't Somebody Turn the Damned Thing Off?", Forbes, 7 August 1978, pp. 47-53.
- [2] Magerrel, Jack, "The Enrollment Roller Coaster: Colleges Fear the Big Dip," The Chronicle of Higher Education XVIII, 1, September 5, 1978, pp. 1 ff.
- [3] The AMBA Executive, "Rising Enrollments Make Market Bullish for B-School Profs" 6, 8, October 1977, pp. 1-3.
- [4] According to the AACSB there were 204 accredited programs as of October 1978. Usually, the AACSB takes action on applications for accreditation at the annual meetings in April.
- [5] White, Rudolph, C.; David Billings; and Robert D. Brown, Jr., "Future Undergraduate Enrollments in Business-Problems and Prospects," AACSB Bulletin, Fall 1977, p. 4 expect BBA enrollments to rise by 12.4 percent between 1977-78 levels and 1984-85. The NCES, on the other hand forecasts BBA enrollments to rise only 7.2 percent during this interval. [See [9] below.]
- [6] The U.S. Census Bureau estimates that the number of 18-year olds in the U.S. population will decline from 4.2 million in 1980 to 3.4 million in 1990. This would be a 19 percent decline in 10 years.
- [7] See [1], p. 53. Some educators view this approach as a viable alternative to rationing doctoral education.
- [8] Mid-Continent East Regional AACSB meetings held at the University of Michigan, Ann Arbor, October 11-13, 1978.
- [9] U.S. Department of Health, Education and Welfare; National Center for Education Statistics (NCES), Projections of Education Statistics to 1985-86, Washington, D.C., 1977.
- [10] At a meeting of directors of doctoral programs representing the major producers of business doctorates, the message seemed to be that enrollments in these programs would likely remain steady or even decline over the next few years. The consensus seemed to be that the finite pool of qualified applicants to doctoral programs in business is relatively small. Without lowering admission and graduation standards significantly, it might be extremely difficult to enlarge these programs. If these intuitive feelings are correct it might forebode serious problems for the new and developing doctoral schools. The meeting referred to above was held at the Graduate School of Business Administration, University of Michigan, Ann Arbor on October 5-6, 1978, and was attended by more than thirty representatives of twenty-five universities. Estimates of annual production of business doctorates in the 1980s range from 1,200 to 2,000. The AMBA Executive (see [3] above) reported that in 1977 the

[10] continued  
output was at "...more than 1,400 per year from 75 programs nationwide and that at least 90 percent of them look for teaching positions."

[11] See [9].'

[12] Harmon, Lindsey R. (Project Director), A Century of Doctorates: Data Analyses of Growth and Change, National Academy of Sciences, Washington, D.C., 1978.

[13] Cartter, Allan, Ph.D.'s and the Labor Market, Carnegie Commission on Higher Education, 1976.

[14] Turner, Robert, "Enrollment Prospects for Collegiate Schools of Business," Business Horizons, Indiana University, October 1976, pp. 55-64.

[15] U.S. Department of Labor, Bureau of Labor Statistics, Ph.D. Manpower: Employment Demand and Supply, 1972-85, Bulletin 1860, U.S. Government Printing Office, Washington, D.C., 1975.

[16] Render, Barry; Wagoner, William; Bobo, James R.; and Corliss, Stephen, Business Doctorates in the South, 1977-1981, Division of Research, University of New Orleans, 1977.