

# Econ Majors Score Well on the GMAT Too!

Paul A. Nelson  
Associate Professor of Economics and Engineering Management  
[pnelson@mtu.edu](mailto:pnelson@mtu.edu)

And

Terry D. Monson, Professor of Economics  
[tmonson@mtu.edu](mailto:tmonson@mtu.edu)

School of Business and Economics  
Michigan Technological University  
1400 Townsend Drive  
Houghton, MI 49931  
FAX: 906-487-2944

## **Abstract**

Nieswiadomy (1998, 2006) found that economics majors scored well on the Law School Admissions Test (LSAT). Since about four times MORE economics majors take the Graduate Management Admission Test (GMAT) than the LSAT, the authors address a similar issue, how well do economics majors perform on the GMAT? They find that the average GMAT score for economics majors is higher than that for any other large (2,200 or more test-takers) humanities and arts, social sciences, or business undergraduate major. However, the GMAT's quantitative content makes it not surprising that science, engineering and mathematics majors have higher average scores than economics majors. Most likely, the analytical rigor of economics courses, the broad nature of economics curricula, and brighter students' self-selection of an economics major combine to contribute to their relatively high performances on the GMAT and the LSAT.

**Key Words:** economics majors, MBA programs, GMAT scores

**JEL code:** A20

## **Introduction**

Michael Nieswiadomy (2006, 1998) found that economics majors perform admirably on the Law School Admission Test (LSAT). Many economics majors also pursue graduate management studies leading to the MBA degree. To do so, they must take the Graduate Management Admission Test (GMAT).<sup>i</sup> About 1,100 programs worldwide use the GMAT, of which 800 require it for every applicant. Since MBA programs enroll more students than law programs, there are approximately twice as many GMAT test-takers than LSAT test-takers.<sup>ii</sup> Further, economics majors are roughly four times more likely to take the GMAT as the LSAT.<sup>iii</sup>

How well do economics majors perform on the GMAT? To respond to this question, we examined average GMAT scores by undergraduate major between 1995/6 and 2004/5 and found that, like the LSAT, economics majors scored higher than most other undergraduate majors.

### **How Do the GMAT and LSAT Differ?**

The GMAT and LSAT differ in the composition of their test-takers, their contents, and their reporting of scores.

Students taking the LSAT have more diverse undergraduate backgrounds than those taking the GMAT. Political science majors represented the highest proportion (16 percent) of LSAT test-takers in 2002-3 while only 5 percent were business and accounting majors and 11 percent were science, engineering, and mathematics majors (Nieswiadomy, 2006, Table 3). In contrast, business and science/engineering/mathematics majors represented about 80 percent of GMAT test-takers over the period examined in this paper. Table 1 gives the average annual number of GMAT test-takers by undergraduate major and their percentage shares during 2000/1 to 2004/5, as well as their weighted average GMAT scores (weights are shares of each major in the total for each year).

Over one-half were business majors; slightly more than one-fourth were science, engineering, or math majors, slightly more than one-sixth were social science majors (of which economics represented one-half); and the rest were from other disciplines.

Because most GMAT test-takers are business, science, engineering, or mathematics majors, the Graduate Management Admissions Council (GMAC) reports fewer major categories than the Law School Admissions Council (LSAC). The GMAC reported just 30 majors (including 'other' categories, e.g., 'other social sciences) from 1995/6 to 1999/0; 37 from 2000/1 to 2001/2 and 42 from 2002/3 to 2004/5 (six majors were added and one was eliminated in 2002/3). The LSAC provided data on 151 majors taking the 2002/3 LSAT (Nieswiadomy, p. 245).

The contents of the GMAT and the LSAT are similar in most respects other than the GMAT's greater focus on quantitative skills. Both are intended to measure general aptitudes for professional study. Both measure reading comprehension and critical thinking skills and contain essay sections. The GMAT's quantitative section requires knowledge of algebra and geometry (a rigorous four-year high school mathematics curriculum is more than adequate preparation). The LSAT's analytical and logical reasoning sections perhaps require more sophisticated skills. However, the GMAT's quantitative section suggests that science, engineering, or mathematics majors should score higher than majors having less exposure to basic mathematics.

The scoring systems of the two tests also differ. The GMAT uses a scale of 200 to 800 while the LSAT uses a scale of 120 to 180. Table 2 summarizes the scoring system. To put this system in perspective, students entering *Business Week's* top ten rated full-time MBA programs in fall 2004 scored, on average, at about the 92<sup>nd</sup> percentile (an average GMAT of 700 compared to a 50<sup>th</sup> percentile GMAT of 540).<sup>iv</sup>

### **The GMAT Performance of Economics Majors**

GMAC (various years) provides information on the number of test-takers and average GMAT scores for each major in each year between 1995/6 and 2004/5. From this information, we calculated weighted average GMAT scores for each major for the first (1995/6 to 1999/0) and second (2000/1 to 2004/5) five-year periods. The weighted averages smooth any extreme values that may have occurred, especially for majors in which there were relatively few numbers of test-takers. The right hand column of Table 1 gives the weighted average GMAT

scores by major over the last five years. Average GMATs by major in the earlier period are not reported here since they are similar to, but slightly lower than, the 2000/1-2004/5 averages (the weighted average GMAT score of all majors rose by 1.6 percent from 521.4 to 529.6 between the first and second-five year periods).

With fewer GMAT-reported majors, we (unlike Nieswiadomy) ranked all majors in Table 3. Economics majors were eighth and ninth in the two five-year periods. Most likely, the GMAT's quantitative section contributed to the high positions of physics, math, engineering, other engineering/computer science, and chemistry majors. Philosophy, government, and history also scored well – as they also did on the LSAT.

In Table 4, we adopted Nieswiadomy's convention of comparing majors with large numbers (2,200 or more) of test-takers. Among these majors, only engineering and math ranked higher than economics. Like Nieswiadomy's LSAT rankings, the average economics GMAT score was higher than averages for all other large humanities, social sciences, and business majors.

Many economics programs are located in business schools. Business majors did not perform well on the GMAT. Their average GMAT score (503.6) was below averages for humanities and arts (542.9), social sciences (547.2), and sciences, engineering, and mathematics (572.2). The business average places them between the 35<sup>th</sup> and 40<sup>th</sup> percentile of all GMAT test takers and suggests that business school advisors might consider counseling students, especially brighter ones, planning to pursue MBAs toward an economics major rather than a business major.

### **Summary**

Economics majors perform well on both the GMAT and the LSAT. For both tests, we suspect that their relatively high performance is, in part, due to the analytical skills developed in economics courses and the broader nature of economics curricula (e.g., business courses typically represent one-half of requirements in business curricula while economics courses typically represent one-third of the requirements in economics curricula). However, we must

reiterate Niaswiadomy's cautions that economics majors are a self-selected group and that the GMAT data do not identify characteristics of economics majors themselves that most likely cause higher standardized test results.<sup>v</sup>

**Table 1. Average Annual Number of GMAT Test-Takers by Undergraduate Major, Percentage Shares, and Average GMAT Scores, 2000/1 to 2004/5**

Major	Number	% of total	Average GMAT
<b>Humanities/Fine Arts</b>	<b>9211</b>	<b>5.2%</b>	<b>542.9</b>
Art History*	137	0.1%	561.2
English	2936	1.7%	554.7
Fine Arts	946	0.5%	499.2
Journalism*	560	0.3%	514.1
Languages	1756	1.0%	538.5
Philosophy	609	0.3%	574.2
Other Fine Arts*	888	0.5%	499.8
Other Humanities	2096	1.2%	534.2
<b>Social Sciences</b>	<b>32805</b>	<b>18.5%</b>	<b>547.2</b>
Anthropology	283	0.2%	556.1
Economics	16171	9.1%	563.3
Education	998	0.6%	491.7
Government	542	0.3%	571.1
History	2159	1.2%	564.1
Law	1671	0.9%	540.8
Political Science	4029	2.3%	536.4
Psychology	3317	1.9%	520.4
Sociology	1416	0.8%	502.6
Other Soc Sci.	2215	1.2%	528.4
<b>Sciences, Engineering, Mathematics</b>	<b>48268</b>	<b>27.2%</b>	<b>572.2</b>
Agriculture*	286	0.2%	498.3
Architecture	688	0.4%	533.7
Biological Sciences	4512	2.5%	554.7
Chemistry	1780	1.0%	566.8
Computer Science	7105	4.0%	559.5
Engineering	25507	14.4%	582.5
Mathematics	2017	1.1%	590.5
Medicine/Nursing*	543	0.3%	513.0
Physics	1048	0.6%	611.5
Statistics	430	0.2%	555.9
Other Engineering/Computer Science*	3056	1.7%	580.9
Other Science/Math	2854	1.6%	526.5
<b>Business</b>	<b>94512</b>	<b>53.2%</b>	<b>503.6</b>
Accounting	22757	12.8%	508.2
Actuarial Science*	116	0.1%	557.7
Business Education	5606	3.2%	500.1
Finance	19101	10.8%	533.0
Hotel Administration	973	0.5%	473.3
International Business	4216	2.4%	503.9
Management	15126	8.5%	484.9
Management Information Systems	3982	2.2%	502.8
Marketing	11766	6.6%	480.6
Operations/Production Management	1138	0.6%	555.0

Other Business	9779	5.5%	491.7
<b>Other Fields</b>	<b>8332</b>	<b>4.7%</b>	<b>494.5</b>
<b>Total</b>	<b>193128</b>	<b>100.0%</b>	<b>529.6</b>

\* indicates that averages were based upon data for 2002/3 to 2004/5 only.

**Table 2. Percentiles for Selected GMAT Scores  
(Based upon 2004/5 results)**

<b>GMAT Score</b>	<b>Percentile</b>
750	99%
715	95%
680	90%
640	80%
600	70%
540	50%
510	41%
470	29%
430	19%
380	10%



**Table 3. Rankings of Average GMAT Scores by Major,  
1995/9 – 1999/0 and 2000/1 – 2004/5**

<b>Major</b>	<b>1995/5 - 1999/0</b>	<b>2000/1 - 2004/5</b>	<b>Major</b>	<b>1995/5 - 1999/0</b>	<b>2000/1 - 2004/5</b>
Physics	1	1	Other Soc Sci.	16	24
Mathematics	2	2	Architecture	17	22
Engineering	3	3	Finance	18	23
Philosophy	4	5	Psychology	19	26
Other Eng/CS		4	Other Sci/Math	20	25
Government	5	6	Journalism		27
Chemistry	6	7	Medicine/Nursing		28
History	7	8	Accounting	21	29
<b>Economics</b>	<b>8</b>	<b>9</b>	Int'l Business		30
Biological Sciences	9	16	Man Inf. Systems		31
English	10	17	Other Fine Arts		34
Art History		10	Fine Arts	22	35
Computer Science	11	11	Sociology	23	32
Actuarial Science		12	Agriculture		36
Anthropology		13	Other Business	24	37
Statistics	12	14	Business Edn.	25	33
Op/Prodn Mgmt		15	Industrial Rels.	26	
Law		18	Education	27	38
Languages	13	19	Management	28	39
Other Humanities	14	21	Marketing	29	40
Political Science	15	20	Hotel Admin.	30	41

**Table 4. Rankings of Average GMAT Scores by Majors with 2,200 or More Annual Test-Takers, 1995/9 – 1999/0 and 2000/1 – 2004/5**

<b>Major</b>	<b>1995/6 -1999/0 rank</b>	<b>2000/1 - 2004/5 rank</b>
Mathematics	1	1
Engineering	2	2
Other Eng/CS		3
<b>Economics</b>	<b>3</b>	<b>4</b>
Biological Sciences	4	6
English	5	6
Computer Science	6	5
Political Science	7	8
Other Soc Sci.	8	10
Finance	9	9
Psychology	10	12
Other Sci/Math	11	11
Accounting	12	13
Other Business	13	18
Business Ed'n.	14	16
Int'l Business		14
Man. Inf. Sys		15
Other Majors	15	17
Management	16	19
Marketing	17	20

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## Endnotes

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<sup>i</sup> The preparation and administration of the GMAT was transferred from the Educational Testing Service to Pearson VUE and ACT, Inc. in 2005.

<sup>ii</sup> Between 150,000 and 200,000 GMATs are administered annually of which 15-22 percent of test takers are repeaters on any given test date (GMAC, 2006, p. 5).

<sup>iii</sup> Nieswiadomy (p. 246) reports 4,163 economics majors took the LSAT in 2002-3 compared to an annual average of 16,171 economics majors took the GMAT during 2000/1 to 2004/5 (see Table 1).

<sup>iv</sup> *Business Week's* (2006) top ten rated full-time MBA programs were Northwestern (average GMAT of 700), Chicago (675), Pennsylvania (713 for 2003 entrants), Stanford (711), Harvard (707), Michigan (692), Cornell (673), Columbia (706), MIT (697) and Dartmouth (704).

<sup>v</sup> Comparison of SAT scores of high school seniors who intended to pursue baccalaureate degrees in economics to GMAT scores of baccalaureate degree economics majors would provide an indication of the value added of the economics major. While such data are not available, the College Entrance Examination Board (CEEB, various years) provides average scores by intended college major of SAT test-takers for 22 broad disciplines (economics must be included in the CEEB's social sciences category). We identified 17 SAT intended majors that corresponded to 17 baccalaureate degrees of GMAT test takers and calculated average SAT scores over the period 1997/8 - 2003/4. There was a 0.66 correlation coefficient between average SAT scores and 2000/1 to 2004/5 average GMAT scores (and a 0.69 correlation between SAT and GMAT rankings of majors). The extreme averages corresponded closely. For example, average SAT scores for mathematics, physics, and philosophy intended majors ranked 1<sup>st</sup>, 2<sup>nd</sup> and 5<sup>th</sup> while average GMAT scores for mathematics, physics, and philosophy majors ranked 2<sup>nd</sup>, 1<sup>st</sup> and 4<sup>th</sup>. At the lower extreme, average SAT scores for intended architecture, health professions, business, agriculture, and education majors ranked 12<sup>th</sup>, 13<sup>th</sup>, 14<sup>th</sup>, 15<sup>th</sup> and 16<sup>th</sup> while average GMAT scores for the same majors ranked 11<sup>th</sup>, 13<sup>th</sup>, 14<sup>th</sup>, 16<sup>th</sup>, and 17<sup>th</sup>. However, there were not close correspondences between these extremes, e.g., intended language/literature (English) and foreign language majors ranked 3<sup>rd</sup> and 4<sup>th</sup> among SAT test takers and 8<sup>th</sup> and 10<sup>th</sup> among GMAT test takers; intended computer science and engineering majors ranked 9<sup>th</sup> and 6<sup>th</sup> among SAT test takers and 6<sup>th</sup> and 3<sup>rd</sup> among GMAT test-takers. Interestingly, intended social science and history majors ranked 9<sup>th</sup> among SAT test takers and 9<sup>th</sup> among GMAT test takers.