Northwestern
CENTER ON LAW, BUSINESS,
AND ECONOMICS

WHEN DOES SELECTIVE COLLEGE MATTER?
MAKING YOUR SCHOOL AND YOUR MAJOR FIT

2021

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Methodology Notes

This report is based on original research that may be found in the paper "Why Majors Matter: Occupation Specificity, Job Skills, and College Selectivity" by Deborah M. Weiss, Matthew L. Spitzer, Colton Cronin, and Neil Chin available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3946507.

The main results in this report were estimated using the National Survey of College Graduates (NSCG). The NSCG is a biennial survey of United States college graduates that is sponsored by the National Science Foundation and conducted by the Census Bureau. The resume data used to classify majors were obtained from a solution provider that parsed job applicant resumes for employers.

The data in the paper was modified in three ways for this report to make the results more accessible to a general audience. First, the paper uses log earnings as the dependent variable, while this report uses earnings in dollars for easier interpretation. Second, the original paper used as its comparison group the major with the highest variation, Social and Protective Services. This report uses Health, because its more or less average characteristics make it a good baseline to intuitively understand the relative return to different majors. These changes produce some small differences in the estimates and occasionally in the rank ordering of majors. However, the selectivity and major premia for each major are approximately the same under each approach. Finally, our original data provided the 25th and 75th percentile SAT scores for colleges, which we used in our estimates and reported in our paper. When we graph our results here, we calculate the corresponding 50th percentile SAT score, since that is a more familiar measure of selectivity.

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INTRODUCTION

Every year, millions of high school students decide whether to attend college, which college to attend, and what field to major in. A key consideration for many students is the role that college plays in their long-run earnings prospects.

Where should a high school graduate go to college? And what should they major in? Admission to a selective college is viewed by some as a prerequisite for long-term economic success. Others dismiss selectivity as irrelevant compared with choice of major. The truth is, of course, much more complex. The return to college selectivity varies greatly by major, and the return to major varies greatly by college selectivity. Although there are complex patterns, there are no simple generalizations that accurately capture these relationships. In making educational decisions at both the individual and policy level, there is no substitute for careful examination of the relationship between major characteristics, individual majors, and selectivity.

Assessing the long-run earnings effect of education choices raises many questions. Graduates of selective colleges earn more, but how much more? Does any increase in earnings justify assuming significant debt? Earnings are also affected by choice of major. Should students consider choosing a major that seems less satisfying but offers a more secure financial future? Is attending a selective college less important for some majors?

In this report, we provide an in-depth exploration of the relationship between earnings, choice of major, and the decision to attend a selective school. The data contained here can help students make these choices.

The role of majors and selectivity in earnings turns out to be quite complex. Even defining what constitutes a major can be tricky, and to improve the understanding of the returns to educational choices we develop a new system of classifying majors. We then examine which of these majors leads on average to higher earnings, and how this is affected by school selectivity.

Not surprisingly, earnings vary greatly by major and selectivity, but the pattern is sometimes unexpected. For example, at non-selective schools, the earnings of computer-related majors are lower than average. At selective schools, engineering is not among the highest-earning majors, but a group of social science majors is.

To explore the pattern of majors further, we identify three characteristics of majors that are associated with earnings: how occupationally specific the major is, how much jobs to which the major leads use math skills, and how much those jobs use writing skills. Intuition may not be a good guide to identifying which majors are high in each of these characteristics. Humanities appears to be the archetypal non-occupationally specific and writing-intensive major, while business majors seem math-intensive and occupationally specific. In fact, humanities majors are less writing-intensive than some business majors, specifically accounting, and are about as occupationally specific as many business majors.

Once we have analyzed these three characteristics of majors, we can examine their relationship to earnings. Not surprisingly, occupationally specific majors tend to produce higher earnings than less

specific majors. However, this association becomes much weaker at more selective schools. Evidently the signal of general skills sent by a selective degree reduces the need for a signal of specific skills from an occupationally-specific major. Also not surprisingly, majors that feed into jobs where mathematical skills are important receive higher earnings. These include not only STEM fields but also a subset of business-related fields such as accounting and finance. More surprisingly, majors that lead to jobs in which writing skills play an important role are also associated with higher earnings, though less so than math-intensive majors. With respect to these two academic skills, a selective school is not a substitute for a high-return major, and the value of majors leading both to math-intensive and writing-intensive jobs actually rises at more selective colleges.

DEFINING COLLEGE MAJOR GROUPS

American universities have a dizzying array of majors. Subject matter is a natural way to group bachelor's degree programs, yet the market value of two majors may vary greatly even when they share broad characteristics or are housed in the same academic department. Our study begins by rethinking the way that majors are classified and devising a new system. Using a large database of resumes, we are able to examine the relationship between major and earnings. The resume data has uniquely detailed information on majors and is ideal for constructing our classification system. We classify majors by a combination of subject matter and earnings potential, shown in Table 1.

"Business" may sound like a single type of major, but it includes subjects as diverse as accounting and fashion merchandising. Among business majors, we find that Accounting has by far the highest return, and therefore we put it in its own group. Other business majors are split into a lower-earning group, Business (Low), and a middle-earning group, Finance/Marketing.

Among social science majors, economics, political science, and international relations are in a high-earning group, Social Science (High). Public policy and specialized psychology fields like clinical and I/O psychology make up a middle-earning tier, Social Science (Middle), and low-earning fields like general psychology and anthropology constitute the lowest-earning group, Social Science (Low).

STEM fields may seem like a single, coherent group, but actually fall into several sub-groups that exhibit different earnings potential. Engineering is the highest-earning, followed first by Math/Computer Science and then by Physical Science. We also separate a fourth class of lower-earning, more vocationally-oriented STEM majors, which we call Engineering/Info Tech.

Among Health/Biology fields, we find that Nursing has the highest average earnings, followed by Biology and then Health, so we divide the fields into these three groups.

Humanities, Communications, and Arts each have a common subject matter, and can be thought of as a distinct set of majors. The final group, which we call Social and Public Services, includes majors such as education, social work, and criminal justice.

TABLE 1

MAJOR CATEGORY	FIELDS INCLUDED
Business (Low)	Business; Actuarial science; Business and managerial economics; Business administration and management
Finance/Marketing	Financial management; Marketing research; Business marketing/ marketing management
Accounting	Accounting
Engineering/Info Tech	Computer and information sciences; Data processing; Information services and systems; Electrical and electronic technologies; Industrial production and mechanical engineering-related technologies; Architecture/environmental design
Engineering	Operations research; Industrial engineering; Environmental engineering; Materials engineering; Biomedical engineering; Chemical engineering; Civil engineering; Computer and systems engineering; Electrical engineering; Mechanical engineering
Social Science (Low)	General psychology; Anthropology and archaeology; Geography; Sociology
Social Science (Middle)	Educational psychology; Clinical psychology; Experimental psychology; Industrial/organizational psychology; Social psychology; Public policy studies; Public administration; Criminology
Social Science (High)	Economics; Political science and government; International relations
Math/Computer Science	Computer science; Applied mathematics; Mathematics; Statistics
Communications	Communications; Journalism
Physical Science	Atmospheric sciences and meteorology; Oceanography; Astronomy and astrophysics; Chemistry, except biochemistry; Earth sciences; Geology; Physics
Humanities	Area and ethnic studies; Linguistics; English language, literature and letters; Foreign languages
Arts	Dramatic arts; Music; Visual and performing arts
Biology	Biology; Biochemistry and biophysics; Botany; Cell and molecular biology; Ecology; Genetics; Nutritional sciences; Pharmacology; Physiology and pathology; Zoology
Health	Audiology and speech pathology; Health/medical assistants; Health/ medical technologies; Medical preparatory programs; Medicine (dentistry, optometry, osteopathic, podiatry, veterinary); Pharmacy; Physical therapy; Public health; Health services administration
Nursing	Nursing
Social and Public Service	Agricultural sciences; Environmental science; Education; Home economics; Law, prelaw, and legal studies; Parks, recreation, leisure, and fitness studies; Theology; Criminal justice/protective services; Social work

HOW MAJOR AND SELECTIVITY WORK TOGETHER

For a more detailed look at the earnings impact of major choice, we turn to a different dataset, the National Survey of College Graduates (NSCG). The NSCG is a biennial survey of United States college graduates that is sponsored by the National Science Foundation and conducted by the Census Bureau. The NSCG has detailed information on individuals and their earnings, though it lacks the detailed information on individual majors needed for our initial classification.

Our analysis shows that both the choice of major and the choice of college affect an individual's earnings. We examine the effect of selectivity by looking at the median SAT score of the school the student attended. Not surprisingly, we find that graduates of more selective schools earn more money regardless of major. In Figure 1, the selectivity of a school is indicated on the horizontal axis, which shows median school SAT scores.

The vertical axis shows the earnings of graduates. The turquoise square indicates typical earnings of graduates from a non-selective school, which we'll call Typical Non-Selective Earnings. The orange square indicates the typical earnings of graduates of a school of median selectivity, which has a median SAT score of just under 1200. We'll call this Typical College Earnings. The violet line connecting them slopes upward, indicating an earnings increase, or Selectivity Premium, from attending a more selective school.

The size of the Selectivity Premium varies across majors. Let's take a look at the earnings of Health majors.

FIGURE 1

The Selectivity Premium

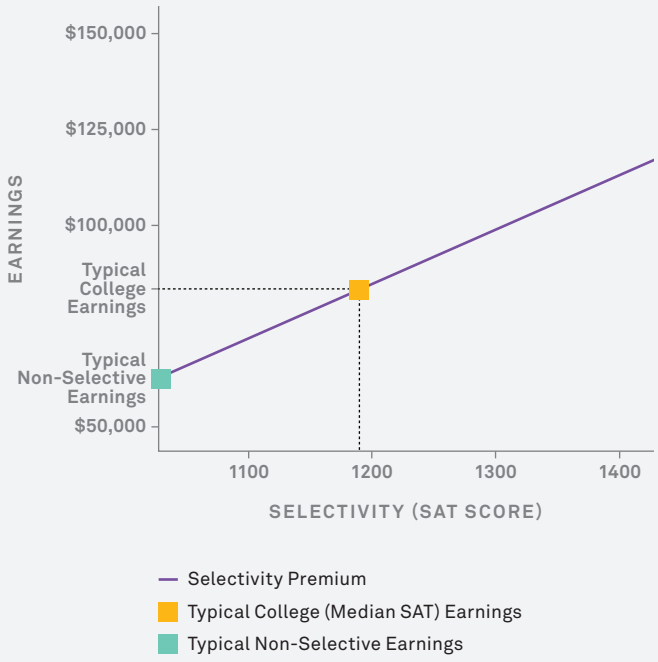
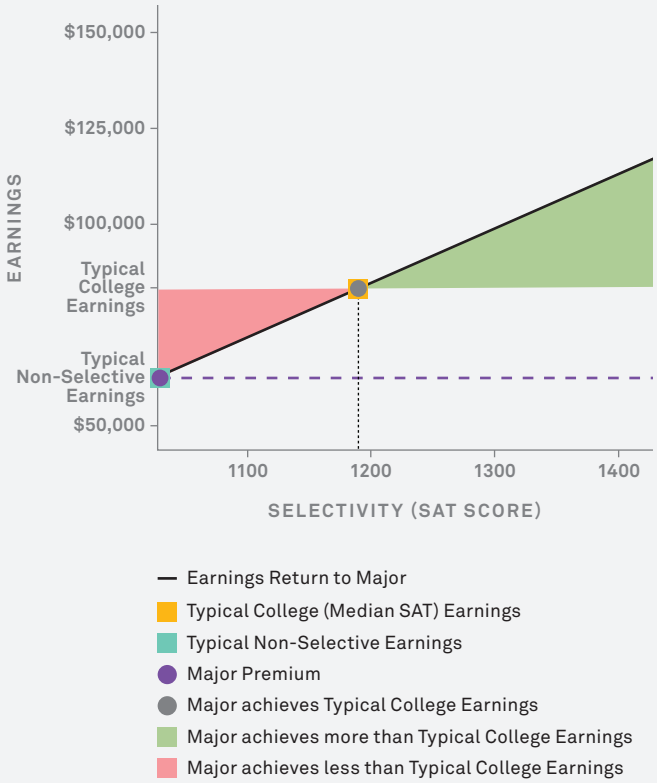


FIGURE 2

Health Majors



In Figure 2 the black upward-sloping line, Earnings Return to Major, illustrates the earnings of Health majors at each level of selectivity. Just as the squares in Figure 1 refer to typical values across all majors, the circles in Figure 2 refer to major-specific values, in this case for Health. The earnings of Health majors at non-selective schools, shown by the purple circle and dotted line, are typical of the earnings of other majors at those schools, as indicated by the fact that the purple circle lies on top of the turquoise Typical Non-Selective Earnings square. In other words, the earnings value of choosing to major in Health, which we call the Major Premium, is about average.

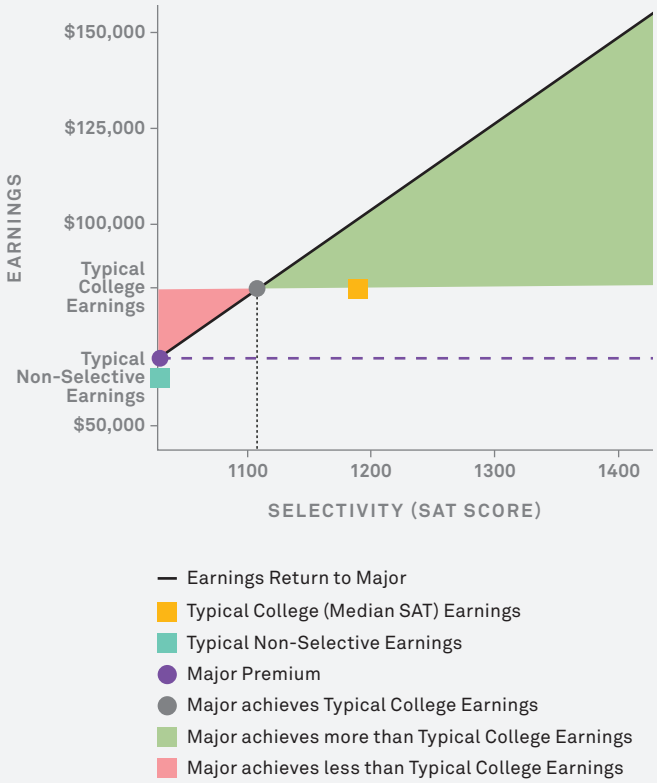
Health also has a pretty typical Selectivity Premium, which is the boost to earnings that comes from attending a more selective school. The slope of the black Earnings line indicates how much selectivity contributes to earnings for Health majors.

Because both the Major Premium and the Selectivity Premium of Health are typical, the earnings of Health majors are about average at every point on the school selectivity spectrum. The earnings of Health majors at schools of median selectivity, indicated by the gray circle, are typical of other majors at those schools, as indicated by fact that the gray circle lies on top of the orange Typical College Earnings square. At schools whose selectivity is below the median, Health major earnings are below the median earnings for college graduates, illustrated by the red shaded area. The gray dot indicates the point where earnings cross over from below to above average. At higher selectivity schools, Health major earnings are above the median, illustrated by the green shaded area.

Three majors with overlapping subject matter often lead to health related careers: Health, Biology and Nursing. This cluster of fields vary greatly in their educational returns. The return to Biology is shown in Figure 3.

FIGURE 3

Biology Majors

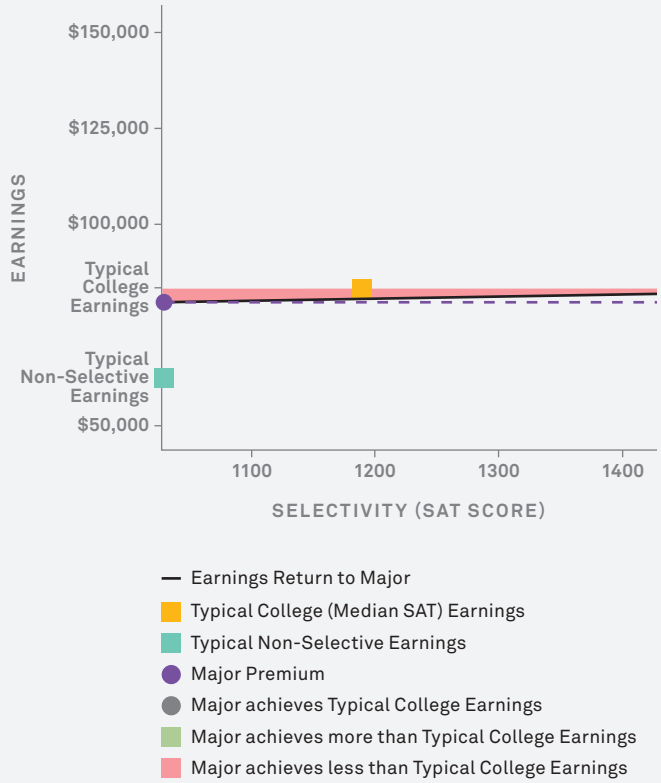


The Major and Selectivity Premia are about average for Health, but both premia are higher than average for Biology. The slightly higher-than-average Major Premium of the Biology major is indicated by the purple dot on the vertical axis, which lies above the turquoise Typical Non-Selective Earnings square. Biology has the second highest Selectivity Premium of all majors, indicated by the steep slope of the black Earnings line. Because both the Earnings and Selectivity Premia are above average, the gray dot lies to the left of the orange square, indicating that the school selectivity needed to achieve Typical College Earnings is lower for Biology majors than for the average major such as Health. As a result, the green shaded triangle, which indicates earnings above the Typical College Earnings level, is larger than the corresponding triangle for Health.

The third health related major, Nursing, is somewhat unusual.

FIGURE 4

Nursing Majors



Nursing has the highest Major Premium of all majors. The purple dot showing Major Premium is almost as high as the orange Typical College Earnings square, indicating that Nursing majors from non-selective schools earn almost Typical College Earnings. However, Nursing majors receive a very low return to Selectivity and the earnings of Nursing majors never actually reach Typical College Earnings – in other words, the black earnings line never reaches the purple square so there is no gray dot indicating the crossover point. The entire area above the sloped earnings line and below the orange square is red, indicating earnings below Typical College Earnings. We can speculate about what might cause this pattern. Of majors in the three health-related fields, only Nursing majors leave college with a high-demand credential, contributing to a very high Major Premium The significance of this credential may continue to affect their entire job trajectory. Perhaps more than any other well-paid field in the US today, nursing resembles apprenticeship, with individuals frequently starting work immediately after graduation and furthering their education with employer sponsorship. The role of employers may blunt the importance of academic credentials in obtaining access to higher-paid jobs.

STEM majors are often thought of as a single group, but our analysis shows that they fall into several categories. Like the majors in the Health group, majors in the STEM group vary greatly in their Major and Selectivity Premia. Figure 5 shows the Major and Selectivity Premia for all majors.

FIGURE 5

All Majors

Biology is both a health and STEM field. As we have seen, it has a higher than average major premium. Its selectivity premium is the highest among all STEM fields, and the second highest overall. Engineering, the largest STEM major, is generally assumed to lead to well-paid jobs and our results to some extent support this. The major premium for Engineering is second highest overall and the highest among STEM fields, including Biology. The value of an Engineering major is often thought not to depend on school selectivity and again our analysis supports this: the slope of the Earnings line for Engineering is relatively flat, though it is positive and is higher than that of a few other majors. Note that this low selectivity premium means that Engineering majors do not receive the same dramatic boost to earnings as do other majors at elite schools. Comparing the graph for Engineering with those of other fields shows that a number of other fields, including Biology and other STEM fields, have higher earnings than Engineering at the highest selectivity schools.

Another STEM field, Math/Computer Science, actually has a negative Major Premium. Earnings of these majors at nonselective schools are lower than Typical Non-Selective Earnings. However, majors in Math/Computer Science receive one of the highest Selectivity Premia. As selectivity rises, this Selectivity Premium quickly overcomes the low Major Premium and these majors earn more than Engineering majors at the most selective schools. Physical Science has an average Major Premium, below that of Engineering but above that of Math/Computer Science. Like Math/Computer Science majors, Physical Science majors receive substantially higher earnings when they attend more selective schools, and at these schools again earn more than Engineering majors.

Our analysis revealed one subset of STEM majors that are not usually treated as a separate group but that have lower earnings and more vocational content. This class, which we call Engineering/Info Tech, has a lower than average Major Premium and lower than average Selectivity Premium. These majors may still be desirable for some people because they generally require significantly less preparation than other STEM fields.

Like health-related and STEM majors, business-related majors show great variation in their Major and Selectivity Premia. The most popular major in the country is business administration, which makes up the bulk of Business (Low). The Major Premium of Business (Low) is below that of the typical major. Since its Selectivity Premium is near the average, these majors earn less than typical majors even at schools of median selectivity. This can be seen by examining the gray dot on Figure 5 for Business (Low), which is to the right of the orange square Typical College Earnings.

Other Business majors show a different pattern of returns. Unlike Business (Low), both Accounting and Finance/Marketing have a higher than average Major Premium, and Accounting has the highest of all Major Premia. These high Major Premia are shown in Figure 5 by the purple dot, which for both Accounting and Finance/Marketing is above the turquoise Typical Non-Selective Earnings square. Both Accounting and Finance/Marketing also have above average Selectivity Premia. The net result is that these majors receive Typical College Earnings at a lower selectivity level than the average major, indicated by gray dot and the crossover point to the left of the orange dot, and at a lower Median SAT score.

Social Science majors again show a varied pattern. The highest earnings group, Social Science (High), consists of Economics, Political Science, and International Relations. Its Major Premium is about average but its Selectivity Premium is the highest of all majors. As a result, Social Science (High) majors attain Typical College Earnings at a lower selectivity level than the average major, and earn more than any other major at the most selective schools. This earnings pattern is different from that of Social Science (Low) and Social Science (Middle), which together contain all other social science fields. The Major and Selectivity Premia of both these majors are below average, and for both, the green region indicating higher than Typical College Earnings is smaller than it is for Social Science (High).

Perhaps not surprisingly, Humanities and Communications majors display patterns that are similar to each other. Both have below average Major and Selectivity Premia. Both do eventually attain Typical College Earnings, though at a higher selectivity level than the typical major, as shown by the

gray circle and relatively small green triangle to the right of the orange square.

The final two majors, Social and Public Service and Arts, also resemble each other. Both have below average Major and Selectivity Premia, but neither ever attain Typical College Earnings, as evidenced by the absence of any gray circle or green triangle.

The different major returns between the least selective schools and the most selective schools can be seen in Table 2. The difference in the ranking of the average major at the least and the most selective schools is about four places out of seventeen.

TABLE 2

Ranking of Return to Major at Least and Most Selective Schools

	LEAST SELECTIVE SCHOOLS	MOST SELECTIVE SCHOOLS	DIFFERENCE IN RANKING
Accounting	4	3	+1
Arts	17	17	0
Biology	5	2	+3
Communications	10	13	-3
Engineering	3	9	-6
Engineering/Info Tech	14	14	0
Finance/Marketing	2	4	-2
Health	7	7	0
Humanities	15	10	+5
Business (Low)	16	8	+8
Math and Computer Science	13	6	+7
Nursing	1	15	-14
Physical Science	6	5	+1
Social and Public Service	12	16	-4
Social Science (High)	8	1	+7
Social Science (Low)	11	11	0
Social Science (Middle)	9	12	-3

At the least selective schools, Nursing is the highest return major, while at the most selective schools it is near the bottom, having dropped fourteen places in the ranking. Moving from least to most selective schools, Engineering drops six places from a top major to an average major. Conversely, Math/Computer Science and the lower earnings Business majors produce below-average returns at the least selective

schools but above-average returns at the most selective. Moving from the least to the most selective schools elevates the highest-paid Social Science majors seven spots in the ranking from an average return to the top return. At the most selective schools, Humanities is ranked five places higher than at the least selective, moving from a low to an almost average return.

A great deal of public discussion centers on whether major or college selectivity matters more to future earnings. Our results allow us to answer this question with a resounding . . . it depends. For Nursing, the major premium dwarfs the effect of selectivity. For Social Science (High), the major premium is small, and selectivity matters a great deal. So, the question of whether major or selectivity matters more has no general answer – it can only be addressed in the context of particular majors and with respect to a particular range of selectivity.

MAJOR CHARACTERISTICS

Public discussion tends to assume that the highest-paid majors are those that are the most vocationally-oriented and the most math-intensive. Majors in this loosely-defined group are assumed to be at the opposite end of the spectrum from an amorphous set of majors that are academic, "soft," and lower paid. Looking at the discussion of individual majors, we can see some support for these generalizations but also some inconsistencies with them.

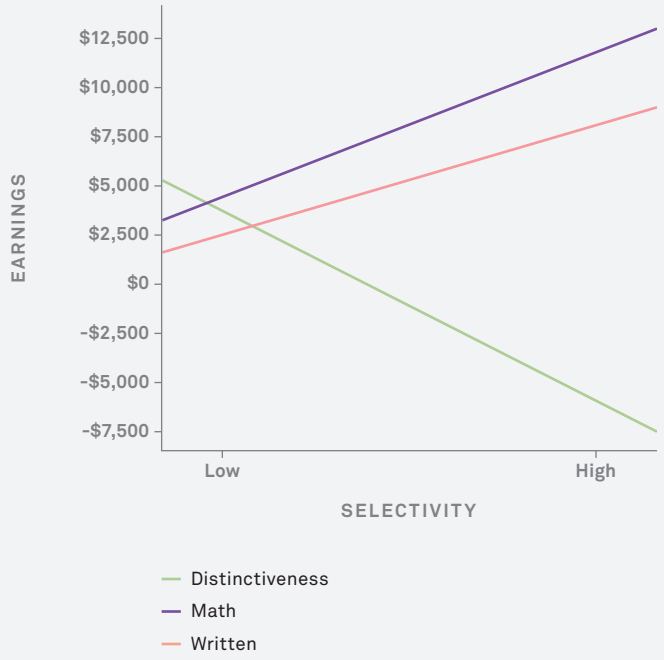
To examine these assumptions more rigorously, we use our resume data to construct measures of three characteristics. Two of these characteristics are skills required for the jobs to which the major typically leads, Written Expression and Mathematical Reasoning. The third is Distinctiveness, which measures the strength of a major's vocational focus by examining how occupationally specific the major is. High Distinctiveness means that people with a given major hold jobs that are infrequently held by other majors, while low Distinctiveness means that the jobs to which the major leads are also commonly held by individuals with other majors.

We can now return to the National Survey of College Graduates to examine the relationship between job characteristics and earnings. In Figure 6, the horizontal axis represents school selectivity measured by median SAT score, and the vertical axis represents the earnings change that results from each of the three characteristics

The value added by both academic skills increases with selectivity in our findings. The relation is particularly strong for Mathematical Reasoning. In other words, the earnings increase from selective schools is especially high for graduates whose majors lead to math-intensive careers. Students who

FIGURE 6

Returns to Major Characteristics



enter writing-intensive career tracks also receive a higher-than-average earnings benefit from school selectivity, but not as much as those on math tracks.

In contrast, the Distinctiveness premium declines with selectivity. Employers may view evidence of competence in specific vocational skills as a partial substitute for the general ability signaled by graduation from a selective school. Academic majors may also provide broader training than vocational ones, which becomes increasingly advantageous at high selectivity levels where the signal of a vocational major is less important.

Using these insights to make real student decisions requires an understanding of how the characteristics are related to each other and a mapping from each major characteristic to specific majors. The relationship between Mathematical Reasoning and Distinctiveness is shown in Figure 7.

Each major is plotted: the vertical axis shows how important Mathematical Reasoning is in the jobs to which the major leads, while the horizontal axis shows the major's Distinctiveness.

The popular assumption that Mathematical Reasoning and Distinctiveness have some have some positive association is confirmed in part by Figure 7. The majors that lead to the most math-intensive jobs are Accounting, Engineering, Physical Science and Math/Computer Science. These four are also among the top six in Distinctiveness. However, there are a number of majors that don't fit this pattern. Nursing is the most Distinctive major but only middling in the math intensity of its career track. Social Science (High) is the least Distinctive major but in the top half of math intensity.

Math and writing may seem like almost opposite skill sets so that few jobs require both and most require one or the other. Our results do not support this. The horizontal axis of Figure 8 shows how important Written Expression is in the jobs to which various majors lead, while the vertical axis shows the importance of Mathematical Reasoning in these jobs.

FIGURE 7

Association between Math and Distinctiveness

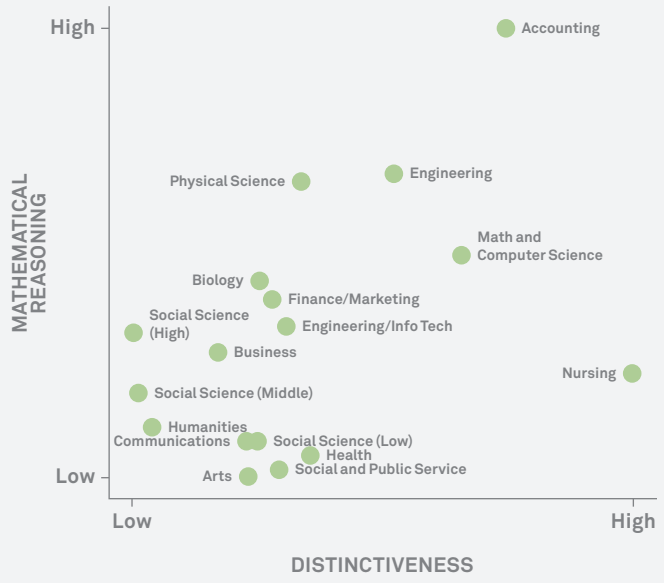
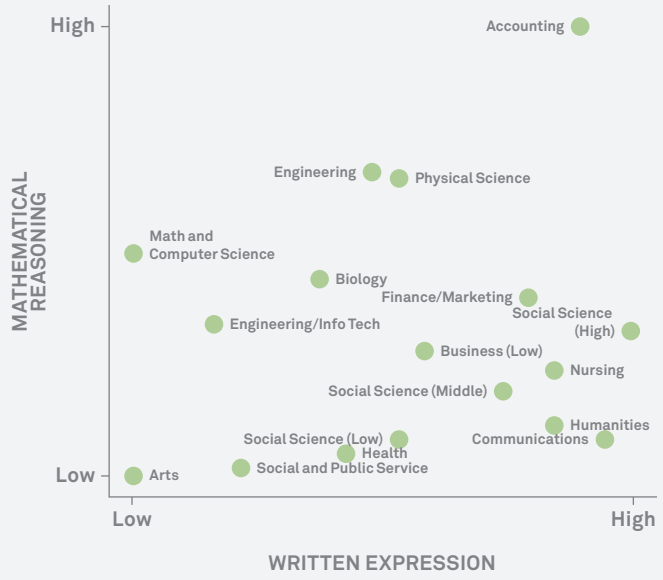


FIGURE 8

Association between Math and Writing



Some majors lead to jobs that require high levels of both skills. Accounting leads to the most math-intensive career path of all majors, and also to the third most writing-intensive. Some majors lead to jobs that require little of either academic skill: the Arts and Social & Public Service majors lead to jobs that require low levels of both. Communications leads to jobs that require writing but not math, while Math/Computer Science leads to jobs that require math but not writing.

These associations explain some the patterns shown earlier in earnings and in the major and selectivity premia, including some of the more surprising results. Figures 7 and 8 show that characteristics of each major may differ from what casual observation would suggest. For example, Humanities is usually considered the quintessentially impractical major, but has approximately the same Distinctiveness as the seemingly occupation-specific Social Science (Middle), which includes fields such as clinical psychology, experimental psychology, industrial/organizational psychology, and criminology. Humanities majors are also usually assumed to be low in math, but lead to more math-intensive jobs than five other major groups. Since Humanities majors can also lead to writing intensive fields, its earnings-selectivity profile compares well to both Social Science (Middle) and a number of other apparently more practical majors including Communications and Engineering/Info Tech.

Our earlier exploration of the returns to majors showed that majors that at first glance look the same may have different returns and selectivity premia. Figure 7 suggests that different occupational characteristics may underlie these differences. Different Business degrees, for example, vary in occupational specificity and math intensity. Business (Low), the lowest earning, is lowest in both career math intensity and Distinctiveness, while the high-earning Accounting is highest in both. The intermediate-earning Finance/Marketing is intermediate in both. Accounting also leads to jobs that are more intensive in writing skills than other business fields, which, in combination with its high math intensity, is consistent with its high selectivity premium.

The importance of academic skills can also be seen in bio-medical fields. Health is only slightly more occupationally distinctive than Biology and leads to careers that are comparable in writing intensity. Biology, however, leads to much more math-intensive careers, which can explain both its overall higher earnings and its higher selectivity premium.

As we saw in Figure 6, while math-intensive jobs are well-paid, so are those that are writing-intensive, and both types of premia rise with school selectivity. The premia of Social Science (High) and Accounting majors seem to be in part attributable to the high Written Expression scores of these majors.

An occupationally specific field may still have a high selectivity premium if it also leads to jobs in which academic skills are important. The career tracks of Finance/Marketing and Engineering/Information Technology are about equally math-intensive, but that of Finance/Marketing is substantially more writing-intensive, which likely contributes to its higher selectivity premium and higher earnings. Similarly, majors that can lead to jobs that require writing skills can outperform similar majors that are more occupationally specific. Humanities majors are less occupationally specific than Arts majors, but they lead to jobs that are much more writing intensive and even somewhat more math intensive. These differences may contribute to the higher earnings and selectivity premia of Humanities majors.

CONCLUSIONS

Many individual and public policy decisions are influenced by assumptions about the economic value of various majors and school selectivity. In response to growing anxiety about college admissions, some commentary has suggested that field of study has a far greater impact on earnings than the selectivity of the school at which a degree is earned. Public discussion tends to assume that majors will lead to remunerative careers if they are vocationally oriented and math-intensive but are less practically valuable if they are academic and focused on verbal skills.

Our results support some of these assumptions and cast doubt on others. Majors do matter a great deal. In general, the highest-paid majors are those that are occupationally specific and lead to math-intensive jobs. However, career paths can require both math and writing skills: often the most valuable majors lead to jobs that require both skills, and the least valuable lead to jobs that require neither. Majors that are occupationally distinct are often math-intensive, but the association is not perfect.

Institution selectivity benefits majors leading to jobs that require either type of academic skill, but the effect is about twice as large for majors leading to math-intensive jobs as those leading to writing-intensive jobs. The positive relationship between selectivity and academic skills is the opposite of the relationship we find between selectivity and specificity: the return to specificity decreases as selectivity increases.

Students choose which college to attend and what to study for a variety of reasons, one of which is long-run earnings potential. Employers and policymakers similarly encourage certain educational paths with economic returns in mind. In making these decisions, they are sometimes guided by simple assumptions about which majors and selectivity levels elevate earnings. When these assumptions are wrong or overly simplistic, the advice to students and the choice of policies can hurt the students they are trying to help. To make sure that we are giving students good advice and that we are choosing wise social policies, we must take into account the complexity of the relation between majors, selectivity, and earnings. This report and the academic paper on which it is based provide the state-of-the-art analysis of these complex relationships.

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