BHEF, a membership organization comprised of a Fortune 500 CEOs from various sectors, as well as leaders of research universities and foundations, is in a unique position to assess the conclusions of "Steady as She Goes." BHEF began a STEM initiative four-years ago designed to understand the STEM pipeline problems and propose solutions where needed.

While some of the study is sound, a core assertion made by the authors—that companies are failing to make jobs attractive and are responsible for the significant decline in the proportion of high-scoring students choosing STEM majors or careers—cannot be explained by the data in the study. Rather, the decline may better be explained by other factors such as a fundamental change in the STEM job market resulting from the bursting of the dot-com bubble in 2000, which happens to coincide with the latest data points used by the authors. At that particular time, students rationally voted with their feet as jobs vanished from an imploding sector of the economy. It also is interesting to note that much has changed over the past several years. For instance, the most recent data from UCLA on college freshman (HERI 2008) indicate an upswing in interest in engineering majors and careers. Likewise, the Computer Research Association showed increases in computer science enrollments of more than six percent last year, the first increase in enrollment in six years. In addition, employees of STEM-oriented companies report high levels of satisfaction with their career choices and jobs. For instance, the most recent Fortune "100 Best Companies to Work For" list includes numerous STEM companies, with at least 12 companies in the top 20.

The authors only examine STEM labor outcomes in isolation. It would have been more informative to examine STEM labor outcomes in contrast to outcomes in other fields. Interestingly, the data source the authors use - the B&B 1993/2003 dataset - does just that, and paints a different picture. For example, NCES' report "Where are They Now" (NCES, 2006) exams this data in detail and indicates that 57.5 percent of 1993 engineering undergraduate degree holders were employed in "Engineering/architecture/computer science" in 2003. This compares to 59.4 percent of business majors who were employed in their given field. Other major career areas show similar rates. This data would support the conclusion that labor outcomes are remarkably similar among graduates among a range of fields, and that a great deal of career switching exists among all types of majors at 10 year employment point in their careers.

The study's authors used overall college GPA as a proxy for college STEM capability. The authors themselves acknowledge, and significant research concludes, that overall college GPA is a weak proxy for likely success in STEM careers. This limitation, combined with small sample sizes, makes it hard to draw much more than conjecture about elite, average, or low-performing STEM students. Yet the study and the article make definitive claims about the career choices of students within these groups.

Finally, the authors did not report on other employment outcomes or examine satisfaction with their undergraduate education among STEM professionals, which also point to different conclusions. For example, the same report found that engineering graduates reported the highest employment levels, the highest earnings, and also reported that their

undergraduate major (e.g. engineering) was very important to their lives, second only to health majors, and ranked first in terms of importance to work and career.

The study does shed needed light on the STEM workforce pipeline and raises some provocative issues that merit further exploration, such as a more systematic examination of college STEM proficiency and career choice. Nonetheless, we should exercise caution in interpreting its results and in using it as the basis for decision making.

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