Engines of Innovation in Large Firms

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Goal of the project: Better understand the reasoning behind the decline of Research and Development productivity in firms across the past several decades

By using archival data, we attempted to document the changes in central research laboratories in firms' R&D effort over time. We were drawn to this topic because we felt that it was important to understand historical trajectory to get a better grasp of the current and future direction of US firms and R&D as a whole.

Skills learned:

- Technical skills, such as Excel and other online databases
- Personal skills, including time management and persistent searching
- Time management skills, such as scheduling and time blocking
- Mechanics and process involved in publishing a paper as a final project.

We hope to apply this trial and error mindset in all other aspects of our career; sometimes, certain data is easier to find, while others may be more hidden. To simply leave certain unknown data to be just that–unknown–was also difficult but valuable to learn.

Challenges:

- Self-motivation
  - Because this project was completely remote, creating our own schedule and own weekly goals were difficult at times. Additionally, since we were contributing to an ongoing project, realizing that there was a larger goal of a paper helped us to find purpose in our work that could feel tedious at times.
- Summarizing
  - During the program, our team met once a week. This meant that we needed to have an adequate understanding of the work that we had completed during the week, plan and set a goal for the upcoming week, and ask any questions that I had during the previous week. Summarizing work that seemed very different and all over the place was another skill I developed to help my team understand my progress.

Claire: I would definitely recommend this program to other students. Research skills can be learned best through hands-on experience, and no matter the subject, using data to draw conclusions will be helpful in higher education and career fields. Most of all, the work was rewarding; I was able to work with a driven and supportive professor who took time to explain even the most minute details to us, and at the end of the ten weeks, I felt as though I contributed to something greater than myself.

Justin: I've learned a lot throughout this summer, both about r&d in large firms and about research itself. The project gave me the opportunity to dive into various sources of data collection in order to find desired information and taught me a lot about navigating databases of information. Furthermore, contributing to a larger research project that had lasted several years was rewarding.