



# Technology Startups and Industry-Specific Regulations

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Entrepreneurship has long been studied as an important determinant for the long-term health and growth of an economy. Many studies highlight how higher levels of government regulation can impede business activity, firm entry, and entrepreneurship. Others have shown that regulation can affect small businesses to a greater extent than medium and large businesses.

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The extensive research on the relationship between regulation and entrepreneurship has yet to examine the relationship between regulation and young, high-growth technology startups.

Technology startups and technology entrepreneurs are at the heart of innovation. These companies are unique in that they do not fit neatly into the traditional categories of small businesses (or small- and medium-sized enterprises) or large and established companies. Many technology startups are young and fast-growing and thus of interest for their potential impact on job creation. Studies have found that high-growth businesses (which are disproportionately young firms) account for almost 50 percent of job creation in the United States.

The relationship between regulation and technology startups may also be different than that between regulation and a typical small or large business. This is because technolo-

gy startups that grow quickly and become “large” are often market disruptors or emerge from undefined, unclear, or regulatory gray areas. Some technology startups have even been described as engaging in “regulatory entrepreneurship” because they are involved in changing regulations by mobilizing their consumer base, and they operate despite industry-specific regulations.

This study provides a first look at the relationship between regulation and technology startups in the United States and in Canada. It examines whether more regulated industries tend to be associated with fewer startup entries and more startup deaths. The industries studied are: pharmaceutical and medicine manufacturing; ambulatory health care services; software publishing industries; data processing, hosting, and related services; information services; credit intermediation and related activities; securities, commodity contracts, and other investments; and insurance carriers and related activities.

This study includes 16,672 active and 2,913 closed technology startups in the United States and Canada that were founded between January 2012 and June 2019. Of the total 19,585 startups, 14,834 are headquartered in the United States and 4,751 in Canada.

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The results suggest that more regulated industries may exhibit lower rates of entry and that more regulated industries are associated with a greater likelihood of a startup closing. These results are stronger for the United States than for Canada. This may be because the study includes more US-based than Canadian-based startups. It may also be that the regulatory and/or market environments differ in the US and Canada such that the impact of regulation differs. For instance, the Canadian regulations may be less relevant for Canadian-based startups if the goal is to expand to the relatively larger US market.

Since heavier regulations add a layer of bureaucracy, increase capital requirements, and lengthen the time horizon of investment returns, startups in more regulated industries could attract less venture capital funding.

Why would more regulation lead to more startups closing? Several studies have found that factors such as higher costs of regulatory compliance burden small companies more than larger and incumbent companies. While compliance cost is one important avenue affecting startup closings, another potential avenue is the availability of investor funding.

Angel investors (typically early investors of a startup) and institutional investors such as venture capitalists provide funding for technology startups in exchange for equity in the startup. Venture capitalists are especially important once a startup has established its concept and is ready for the growth stage. Venture capitalists invest in startups with the intent of getting significant returns in a short time. More specifically, the goal of venture funds is to achieve returns in the order of 20 percent or more per year within a 10-year period. Because of this, they are seeking to finance companies that have shorter time horizons and greater capital efficiency. Since heavier regulations add a layer of bureaucracy, increase capital requirements, and lengthen the time horizon of investment returns, startups in more regulated industries could attract less venture capital funding. This study discusses this avenue and points to some preliminary evidence suggesting that some venture capital investors are deterred from investing in startups in more regulated industries.



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