Research Briefs
IN ECONOMIC POLICY

CATO INSTITUTE

December 4, 2019 | Number 192

The Failure of Free Entry

By Germán Gutiérrez and Thomas Philippon, New York University

The efficiency of a market economy requires free entry, which plays a critical role for allocative efficiency and incentives. Free entry ensures that industries adapt to economic shocks, leading to the exit of firms from less-profitable industries and their entry into more-profitable ones. This leads to a theory of entry similar to that for investment. Just as scaling up certain types of firms generates economic value, reallocating firms between industries also generates value. This paper studies the evolution of free entry in the United States over the past 40 years.

The data show that free-entry rebalancing has diminished in the U.S. economy over the past 20 years. Firms used to enter more and exit less in industries with larger ratios between the firm's market value and its asset-replacement value (known as the Q ratio, or Q), exactly as free entry would predict. In recent years, however, this elasticity has been close to zero. The decline is consistent across data sources and is stronger outside manufacturing.

Our first contribution is to document this fact and therefore shift the focus away from the decline in average entry rates and toward the allocation of entry. A series of important papers has documented declines in entry, exit, and reallocation rates in the U.S. economy, finding a widespread, secular decline in job flows, including in the traditionally high-growth information-technology sector.

Focusing on the allocation of entry helps us distinguish among competing explanations for the decline in dynamism. Moreover, an efficient allocation improves welfare irrespective of the average level of entry. Several papers argue that the decline in the growth of population and the labor force might be responsible for the decline in business formation. Such demographic trends can explain changes in the number of entrepreneurs, but they struggle to explain the decreasing correlation between entry and the market-value-to-replacement-cost ratio. Even if entrepreneurs are few, they should still enter first in high-ratio industries. In fact, the smaller the aggregate pool of entrepreneurs, the more important it is to allocate them efficiently. An increase in the shadow price of entrepreneurship increases the incentives to allocate them to high-Q industries. Demographic explanations, therefore, predict a stable or increasing response of entry to Q, not a decrease, as we find in the data.

The timing of the decrease is also informative. Unlike measures of average entry rates, which collapse after 2008, ours is not much affected by the Great Recession. The drop happens earlier, in the early 2000s. This rules out a host of cyclical explanations. For instance, some argue that the collapse of the market for home-equity loans has made it harder for would-be entrepreneurs to get access to capital. That might explain the decline in the average entry rate after the Great Recession, but it cannot explain our main fact.

To study the underlying forces, we present a framework that considers three shocks: industry-demand (or productivity) shocks, entry-cost shocks, and shocks to production technologies affecting returns to scale. Holding production technologies constant, we show that the response of entry reveals the relative importance of demand and entry-cost shocks. Demand shocks create a positive correlation between entry and Q, while entry-cost shocks lead to a negative correlation: they decrease the number of entrants at the same time that they raise the market value of incumbents. A

Editor, Jeffrey Miron, Harvard University and Cato Institute

shift from an economy dominated by demand and productivity shocks, as in standard models, toward an economy where entry-cost shocks play a more important role may, therefore, explain the trends. But this is not the only explanation. Changes in production technology that increase returns to scale also increase the profits and Q of incumbents while decreasing the entry of smaller firms. So we have two potential explanations: either the importance of entry costs relative to demand and productivity shocks increased or there has been a shift toward increasing return technologies—perhaps due to the rise of intangibles.

To differentiate between these explanations, we first consider returns to scale. We begin by estimating returns to scale at the industry level and find a small increase after 2000—from 0.78 to 0.8, on average. These estimates follow well-established approaches but have limited power, given the availability of a single time series per industry. We therefore complement our results with firm-level estimates of returns to scale. Again, we do not find evidence of a broad increase in returns to scale over the past 20 years—in line with findings for manufacturing in the United States and other findings for all industries globally. Moreover, the estimated changes in returns to scale in our panel of industries are uncorrelated with the decline in the Q-elasticity of entry. We conclude that returns to scale cannot be the main explanation for the failure of free entry, which leaves us with entry costs.

Entry costs come in several varieties, from regulation to technology and financial frictions. We construct proxies for all these costs and test whether they can explain the failure of free entry. We find strong support for regulation and for limited or no support for the remaining hypotheses.

Regulations are endogenous, and the regulation of entry is the subject of a large amount of literature in political economy. Public interest theory emphasizes corrective regulations to deal with externalities and to protect consumers. Public choice theorists are suspicious of this idea, however. Economist George Stigler argues that "as a rule, regulation is acquired by the industry and is designed and operated primarily for its benefit." Large differences in entry costs are documented across countries, providing empirical support for the public choice theory. We present five tests to document the role of regulation in the failure of free entry and distinguish between benign regulation and captured regulation.

Consistent with the prediction of the model, our first test finds that the variance of output growth rates has remained stable, while the variance of regulation shocks has increased. Our second test shows that measures of regulation are correlated with the decline in the response of entry to Q. Our third test focuses on large versus small firms. Under the public choice theory, large firms are more likely to influence regulators. Consistent with this prediction, we find that regulations hurt small firms and lead to declines in business dynamism (employment growth, establishment creation, and establishment growth) in small firms relative to large firms. Regulations do not always harm large firms, which explains some conflicting results in the literature.

Next, we look at changes in the profitability of incumbents exposed to large regulatory changes. Large changes are more likely to motivate lobbying efforts. Until 2000, we find that large regulatory changes were not correlated with changes in incumbents' profits. After 2000, however, we find that large regulatory changes are systematically followed by significant increases in incumbents' profits. Since regulatory complexity and lobbying expenditures increased after 2000, this suggests that large firms may be increasingly able to influence regulation to their benefit.

Our last test, therefore, considers lobbying. We know that lobbying is overwhelmingly done by large firms. Under the public choice theory, we would expect lobbying to hurt small firms relative to large ones, and indeed this is what we find. When regulation and lobbying expenditures interact, we find that the confluence of lobbying and regulation is particularly harmful to small firms.

Overall, our analyses suggest that rising entry costs and a shift from benign regulation toward increasingly captured regulation explain the failure of free entry.

NOTE:

This research brief is based on Germán Gutiérrez and Thomas Philippon, "The Failure of Free Entry," NBER Working Paper no. 26001, June 2019, https://www.nber.org/papers/w26001.