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## Examining Small Business Impacts in the Regulatory Development Process: The Drawbacks of Averaging

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### Introduction

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Federal agencies are required to prepare an economic analysis to quantify the costs and benefits of significant regulations they promulgate.<sup>1</sup> When formulating these analyses, Congress has mandated through the Regulatory Flexibility Act (RFA) that agencies also evaluate how their regulations will specifically affect small businesses.<sup>2</sup> Small businesses are an important segment of the economy, representing 48 percent of private sector employment and 62 percent of net new jobs.<sup>3</sup> Failing to take small businesses into account when assessing how best to achieve regulatory objectives can result in disproportionately burdensome rules and regulatory inefficiencies.

The RFA's purpose is to ensure that federal agencies consider small businesses in regulatory policymaking. However, when the regulatory impact analysis treats small businesses as a single group its insight is limited. This issue brief shows how separating small businesses into more detailed size groupings for regulatory impact analyses can help ensure that regulatory objectives can be achieved without unduly burdening the smallest businesses.

This issue brief uses the Statistics of U.S. Businesses (SUSB), a U.S. Census Bureau dataset cosponsored by the Office of Advocacy. SUSB contains detailed business size information so the effects of treating small businesses as a single group versus detailed groups in regulatory analysis can be compared. The issue brief evaluates 433

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1. Executive Order 12866, "Regulatory Planning and Review," Sept. 30, 1993. [www.archives.gov/files/federal-register/executive-orders/pdf/12866.pdf](http://www.archives.gov/files/federal-register/executive-orders/pdf/12866.pdf)

2. The Office of Advocacy generally defines small businesses as those with fewer than 500 employees.

3. U.S. Small Business Administration, Office of Advocacy, "Frequently Asked Questions about Small Business," 2017. [www.sba.gov/sites/default/files/advocacy/sb-faq-2017-web.pdf](http://www.sba.gov/sites/default/files/advocacy/sb-faq-2017-web.pdf)

## Data and Methodology

This issue brief uses the Census Bureau’s 2012 Statistics of U.S. Businesses (SUSB). SUSB is an annual series that provides economic data on U.S. businesses by industry, size of business, and geographic area. The 2012 dataset is the latest available with estimated receipts for U.S. businesses. The analysis is limited to employer firms in industries defined with an employment size cutoff. Industries that have a revenue-based size standard are excluded. The analysis uses a 500-employee small business size standard. The 500-employee cutoff is the modal employment size standard and is commonly used for research. The data set excludes industries that have fewer than 50 businesses with fewer than 20 employees. The resulting study group contains 433 industries.

industries defined with employment size cutoffs to show the value of using more detailed size groupings in regulatory analysis. Industries with employment size groupings tend to be in manufacturing, wholesale trade, and mining. Two groups are analyzed: small businesses with 1 to 499 employees (“sub-500” businesses) and those with one to 19 employees (termed “sub-20” businesses).

## Small Business Size Standards

Federal agencies use the Small Business Administration (SBA) size standard when analyzing the economic impact of proposed regulations to identify the number of small businesses likely to be affected.<sup>4</sup> The standards set the highest level of employment or revenue that a business in a specified industry can have to be classified as “small.” The specific revenue or employee cutoff varies from one industry to the next, and it is derived by SBA according to industry factors.<sup>5</sup>

The size standards for small business span a wide range of enterprises. For example, 99.7 percent of all businesses are considered small using the cutoff of 500 employees or fewer.<sup>6</sup> An economic analysis of such a disparate group—which includes businesses with one employee and those with 499—is likely to overlook significant differences.

## Smallest Firms (Sub-20) Are Most Numerous in Most Industries

Most industries contain a mix of large and small businesses. Within the small business group there is a distribution of small, medium and larger “small businesses.” The distribution of these groups is not even—each group contains varying numbers of businesses. The SUSB shows that most industries are made up of a significantly larger number of businesses with fewer than 20 employees (or “sub-20” businesses).

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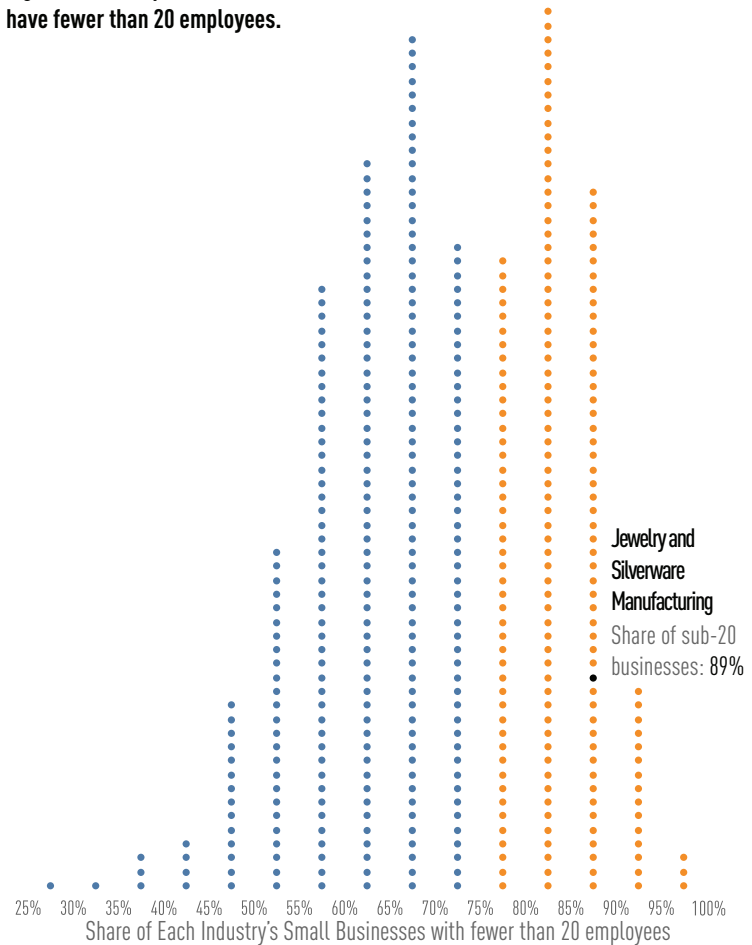
4. Under the RFA, agencies can use an alternative definition that is reviewed by the Office of Advocacy and published in the Federal Register for public comment.

5. SBA’s Size Standards methodology can be found here: [www.sba.gov/sites/default/files/size\\_standards\\_methodology.pdf](http://www.sba.gov/sites/default/files/size_standards_methodology.pdf)

6. The size standard of 500 employees or fewer is often used in the Office of Advocacy’s research publications to simplify cross industry analysis.

Figure 1 shows the percentage of sub-20 small businesses in each industry. Each dot represents a specific industry. In the vast majority of industries sub-20 businesses are the largest constituency. As seen in the figure, sub-20 businesses make up more than 75 percent of all small businesses in over a third of industries, and they are a minority of the total small business group in only 5 percent of industries.

**Figure 1: Three-quarters of small businesses in 179 out of 433 industries have fewer than 20 employees.**



## Average Receipts of All Small Businesses and Sub-20 Businesses Are Very Different

When analyzing the prospective costs of regulations on small businesses, agencies compare the compliance cost of the regulation to the revenue of the businesses subject to it. This provides a context for the regulation's cost impact. However, the average receipts of the entire small business group (sub-500) and of sub-20 businesses are quite different.

As shown in the previous section, most industries are predominantly made up of sub-20 businesses, but the average revenue for *all small businesses* may not reflect these businesses. This is caused by the relatively small number of larger small businesses with high receipts pulling up the average. For example, small businesses with 100 to 499 employees across all industries average \$74 million in annual receipts, which is 25 times greater than the average revenue of businesses with five to nine employees, \$3 million.

Table 1 shows how such disparate revenues affect the overall average for all small businesses. In the industry example below, jewelry and silverware manufacturing, 89 percent of businesses have fewer than 20 employees and average revenues of \$626,000. The other 11 percent of the industry (230 larger small businesses) have significantly higher average revenues of \$12.9 million. When grouped together, the average revenue of *all* small businesses is \$1.97 million. The industry average is significantly higher (about 3.1 times) than the average revenue of the sub-20 employee businesses that comprise 89 percent of this sector's small businesses (Table 1).

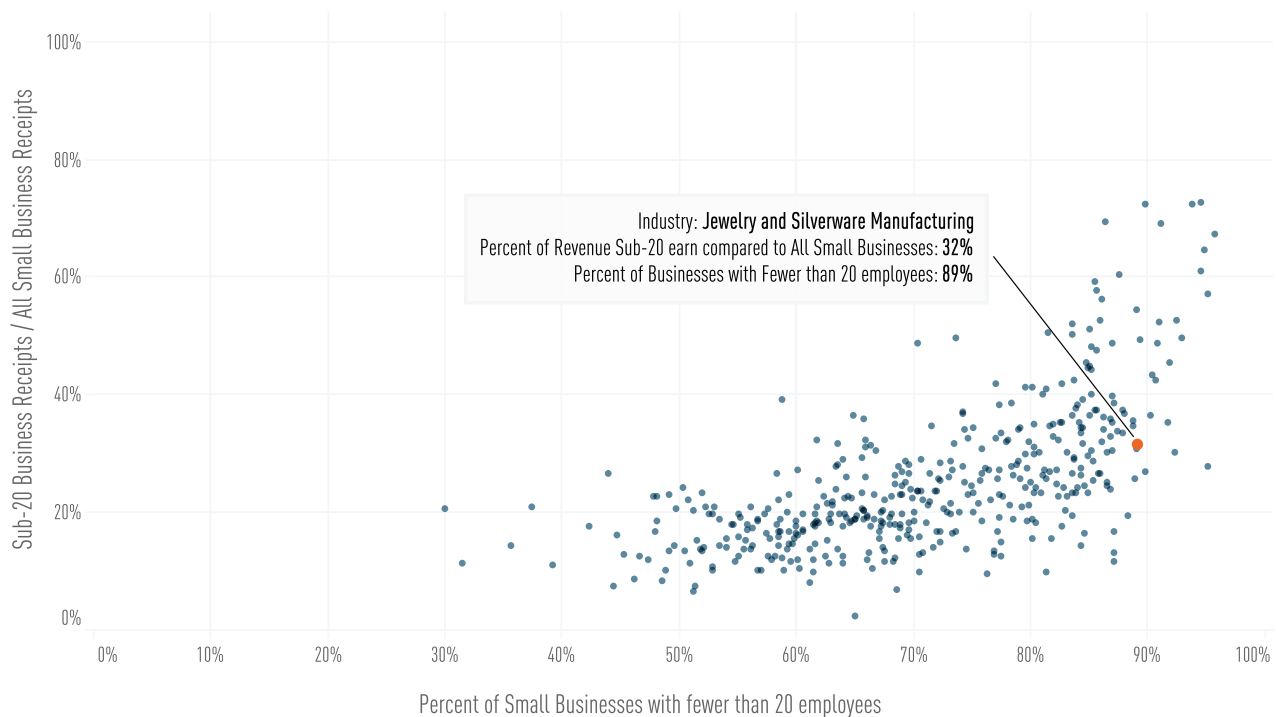
**Table 1. Small Business Size Breakout of NAICS 339910: Jewelry and Silverware Manufacturing**

|                                                                               | Number of Firms | Percent of All Small Firms | Average Annual Revenues (\$) |
|-------------------------------------------------------------------------------|-----------------|----------------------------|------------------------------|
| Sub-20 businesses (1-19 employees)                                            | 1,860           | 89                         | 626,000                      |
| Larger small businesses (20-499 employees)                                    | 230             | 11                         | 12,910,000                   |
| All small businesses (499 or fewer employees)                                 | 2,090           | 100                        | 1,971,000                    |
| Ratio of average annual receipts of all small businesses to sub-20 businesses |                 |                            | 3.1                          |

This example is not an extreme. It is a fairly typical distribution found in the SUSB data. Figure 2 shows the average revenue comparison for every industry, as well as the percent of sub-20 businesses in each industry. As seen in the figure, the sub-20 small businesses have significantly lower revenues than when you look at all small businesses in most industries. In 78 percent of industries the average revenue for a sub-20 business is 33 percent the average revenue for all small businesses. In 24 percent of industries the sub-20 small businesses make less than 15 percent of the average revenue for all small businesses.

As expected, industries with a greater representation of sub-20 businesses tend to have a smaller disparity. This occurs because there are relatively fewer 20-499 employee businesses to pull up the average. Even so, in 84 percent of industries with very high sub-20 business representation their average revenues are still only 50 percent of all small businesses.

**Figure 2: Revenue Difference Between All Small Businesses and Sub-20 Small Businesses**



## In Practice: Determining the Impact of Regulation

Agencies use different conventions when determining the economic significance of regulatory impacts on small businesses. While no single rule of thumb is appropriate for all businesses or industries, regulatory costs that amount to less than 1 percent of business revenue are often deemed not to impose a significant burden. As seen above, the average revenue for the entire small business segment of an industry is heavily weighted by its larger constituents, and usually to such an extent as to misrepresent the revenues of the majority of industry participants, particularly the smallest businesses. When the impact assessment only compares the estimated regulatory cost to the industry revenue average, it appears that the likely impact is not burdensome to the industry (that is, it amounts to less than 1 percent of revenue); however it may have a much greater burden for a majority of the industry, typically smaller businesses.

The jewelry and silverware industry can again be used to illustrate this problem. If in order to achieve a regulatory objective, a regulation imposes an estimated compliance cost of \$20,000 on each business in the industry, the impact will be 3 percent of revenues for sub-20 employee businesses, which make up 89 percent of the industry. Meanwhile, the impact on larger small businesses amounts to only 0.2 percent of revenues.

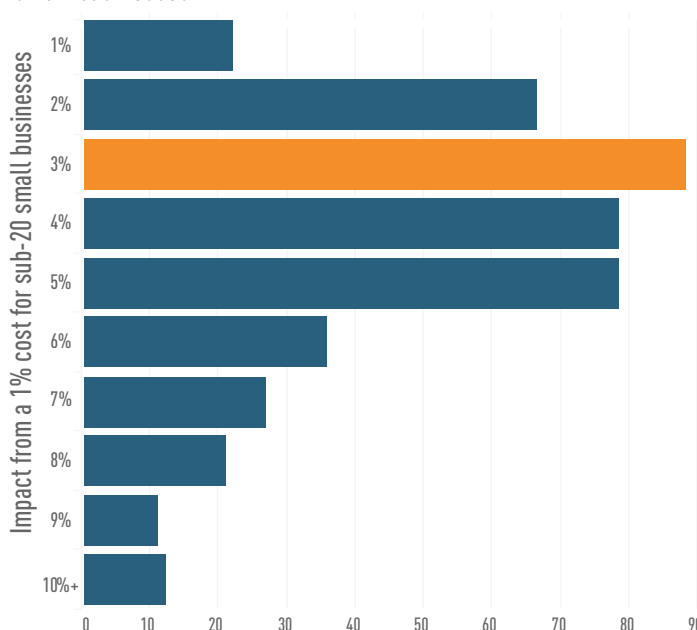
A cost impact of 3 percent of revenue can be considered high. However, without separating the small businesses into different size categories this disparity would be concealed, since the cost-to-revenue comparison for *all* small businesses shows an impact of only 1 percent (Table 2).

**Table 2. Regulatory Impact by Firm Size in NAICS 339910, Jewelry and Silverware Manufacturing**

|                                               | Annual Average Revenue (\$) | Annualized Cost of Regulation | Cost of Regulation as a Percent of Revenues |
|-----------------------------------------------|-----------------------------|-------------------------------|---------------------------------------------|
| Sub-20 businesses (1-19 employees)            | 626,000                     | 20,000                        | 3.2                                         |
| Larger small businesses (20-499 employees)    | 12,910,000                  | 20,000                        | 0.2                                         |
| All small businesses (499 or fewer employees) | 1,971,000                   | 20,000                        | 1.0                                         |

Figure 3 shows how a regulatory impact of 1 percent on all small businesses affects sub-20 businesses in every industry. In 80 percent of industries, a 1 percent impact on all small businesses amounts to an impact of more than 3 percent for sub-20 employee businesses. Even more significantly, in 42 percent of industries the impact would be over 5 percent of revenue for sub-20 employee businesses. A regulatory cost that is over 5 percent of revenue is almost always considered very significant. However, if the analysis uses the average across all small businesses, the impact appears to be very small.

**Figure 3: Impact on sub-20 businesses of 1 percent cost for all small businesses**



## Conclusion: Detailed Groupings Tell an Important Story

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Unless agencies perform small business impact analysis on detailed size groups, they will lack full understanding of the impact of their policy proposals on an important source of economic growth and job creation. This issue brief shows how averaging the revenues of a dispersed set of small businesses in an analysis of regulatory impacts can cause the majority of small businesses to be misrepresented. In the examples above, heavy burdens on businesses with fewer than 20 employees in almost every industry may be missed. Large burdens can put smaller businesses at a competitive disadvantage, leading to loss of revenue and potential closures.

While this issue brief shows a simplified example, analyzing a regulation's impact on small businesses is complex. Costs fall on different sized business differently for every regulatory scenario. The smallest businesses may experience the smallest regulatory costs, yet experience the largest burden due to their size. Depending on the regulation, larger small businesses may be the ones faced with the highest burden, with the smallest businesses spared. Without performing regulatory analysis on finer-grained size groups, these consequences are hidden from view.

In some rulemakings, agencies have performed this type of analysis to improve their regulations. For example, the Department of Justice issued a rule regarding the required number of movie captioning and audio description devices in movie theaters. Utilizing the SUSB data and evaluating the impact on the different sized small businesses, they crafted the rule to lower the burden on the smallest theaters.<sup>7</sup> The Department of Agriculture also recently proposed a rule on food labelling requirements. In its proposed rule, the agency used SUSB data to set an exemption level for a subset of the smallest businesses, while providing a delay in implementation for other small businesses.<sup>8</sup>

Agencies should use the most detailed small business groupings as technically possible when analyzing their regulations. This is feasible using SUSB's 16 additional size breakouts of businesses with fewer than 500 employees.<sup>9</sup> Understanding the detailed makeup of an industry—and clarifying how the benefits and costs are distributed across these groups—can contribute to policy alternatives that reduce burdens and improve regulatory efficiency.

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7. Final Regulatory Assessment and Final Regulatory Flexibility Analysis, Final Rule, Nondiscrimination on the Basis of Disability by Public Accommodations—Movie Theaters; Movie Captioning and Audio Description. U.S. Department of Justice, November 2016. [www.ada.gov/regs2016/final\\_ra\\_movie\\_captioning.html](http://www.ada.gov/regs2016/final_ra_movie_captioning.html)

8. U.S. Department of Agriculture, Notice of Proposed Rulemaking, National Bioengineered Food Disclosure Standard, *Federal Register*, Vol. 83, No. 87; Accessed from Regulations.gov, May 4, 2018. <https://www.regulations.gov/document?D=AMS-TM-17-0050-0004>

9. In the most detailed size groupings, data quality can suffer. However, SUSB provides multiple larger groupings under 500 employees that suffer fewer quality issues.