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Unpacking the Declining Receipts Share of Small Firms

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Highlights:

- Small firms have been taking in a declining share of total receipts for more than 50 years. In 1963 small firms generated 55.7 percent of receipts, while in 2017 they generated 35.6 percent. Although real small firm receipts have grown, large firm receipts have outpaced them.

- Small firms with fewer than 100 employees saw larger receipt share declines, while those between 100 to 499 employees saw receipt shares remain flat.

- The average firm with fewer than five employees saw real receipt growth of just 2.1 percent since 1992, with all the growth accruing prior to 1997.

- Since 2002, the sectors with the biggest drop in receipts were Health Care, Education Services, and Wholesale and Retail. Conversely, small firms grew their fraction of revenue in Management of Companies; Mining; Utilities; Transportation and Warehousing; and Accommodations and Food Service.

- Substantial variation exists between industries. Between 2002 and 2017, about one-third of 3-digit and 6-digit NAICS industries saw an increasing small firm receipts share while 6-15 percent saw a decline of more than 10 percentage points.

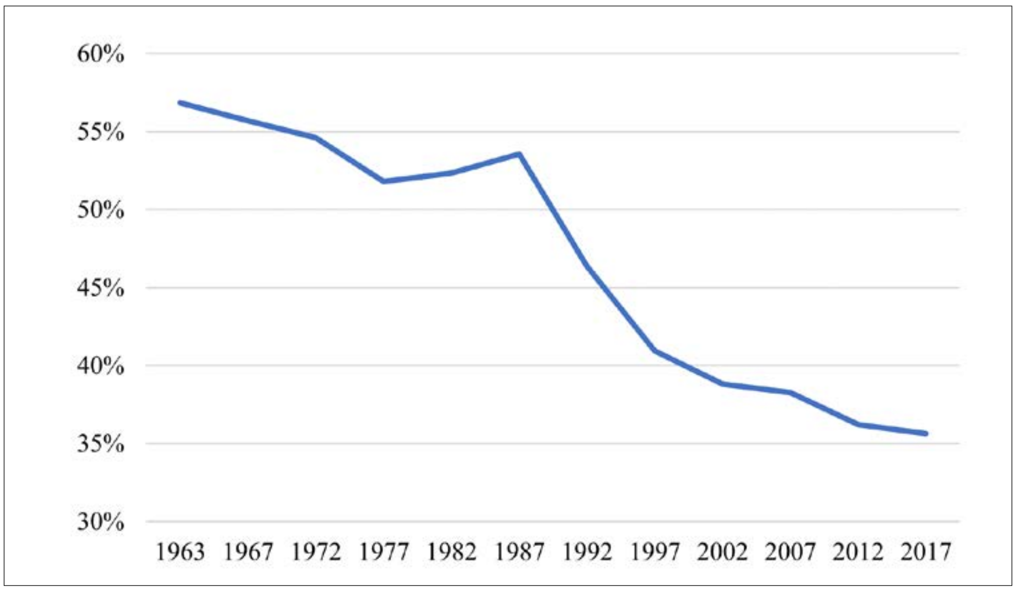
- Most states and Washington, D.C. saw a decline in the share of total receipts going to small firms. Since 1997, only Louisiana, Rhode Island, and South Dakota saw an increase.

- A state's change in small firm share is largely a function of changing industry composition.

The Economy-Wide Trend

As seen in Figure 1, small firms' receipts[1] have been on a general decline since 1963.[2] In the 1963 Economic Census[3], small firms with between 1 and 500 employees[4] had real receipts of $3.26 trillion (in 2017 dollars[5]), good for 56.8 percent of all receipts. By 1977, while real receipts increased to $5.44 trillion, small firm's share had fallen to 51.8 percent. Small firms made up some ground with their share of receipts rising almost 2 percentage points up to 53.6 percent over the next decade. However, the decline continued over time. In 2017, small firm receipts had grown to $13.18 trillion but their share of receipts fell to just 35.6 percent. Larger firms were able to grow much faster, with their receipts increasing by 872 percent, 2.8 times the rate of small businesses (309 percent). Small business receipts growth was also slow compared to overall economic growth as real GDP grew 498 percent over the same period.[6]

Figure 1: Small Firm Receipts (Percent of Total)



Source: Statistics of U.S. Businesses and Enterprise Statistics Program, Various Years, U.S. Census Bureau, author's calculations. For this figure a small firm is an employer with fewer than 500 employees.

[1] The U.S. Census Bureau defines receipts as "operating revenue for goods produced or distributed, or for services provided. Receipts excludes local, state, and federal sales and other taxes collected from customers or clients and paid directly to a tax agency."

[2] The declining share of economic activity contributed by small firms has been a topic of study before, including at the Office of Advocacy. Most recently, Small Business GDP, 1998–2014 by Kobe and Schwin showed small firm growth was being outpaced by large firm growth over the 16-year period.

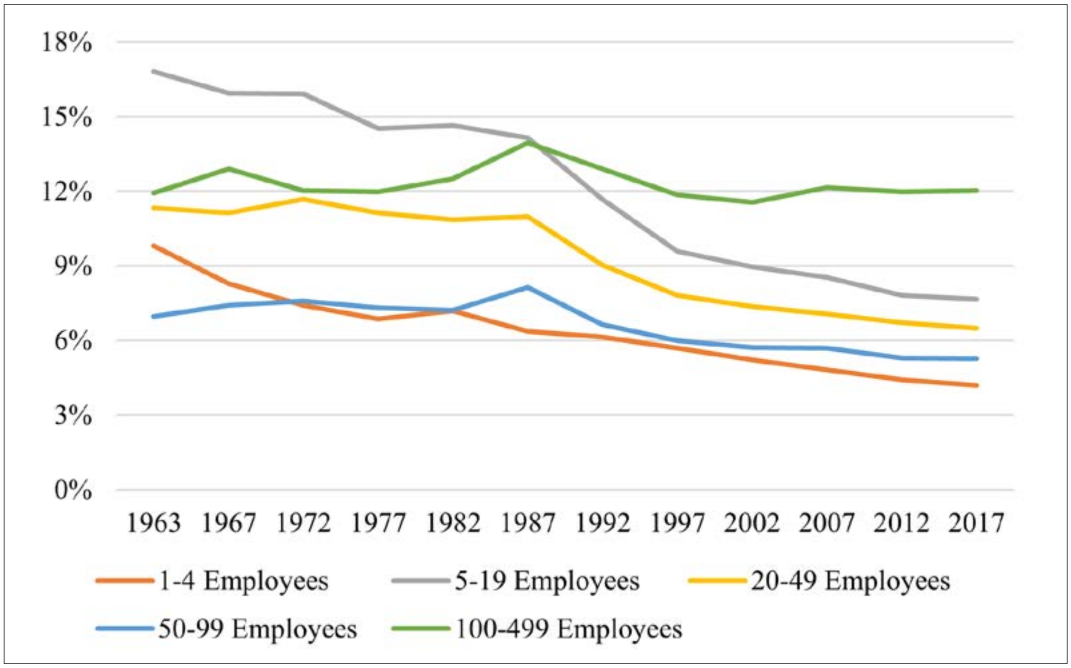
[3] The Economic Census is conducted in 1963 and every five years since 1967. Data on from the Economic Census is recorded in the Statistics of U.S. Businesses (SUSB) since 1997 (Statistics of U.S. Businesses). For years 1963 to 1992 it was retrieved from the U.S. Enterprise Statistics (Enterprise Statistics Program).

[4] Unless otherwise noted the term small firm will refer to those business which employ at least one but fewer than 500 employees. Firms with no employees are tracked in a different census dataset, the Nonemployer Statistics, which does not provide the same level of industry detail as SUSB. The exclusion of nonemployers is not expected to change any conclusions in this brief as just 3.2 percent of all receipts were earned by the group in 2017.

[5] All dollar values are expressed in constant 2017 dollars, deflated using the GDP Implicit Price Deflator (available at Gross National Product: Implicit Price Deflator, from the St. Louis Fed).

[6] Real Gross Domestic Product, from the St. Louis Fed.

Figure 2: Small Firm Receipts (Percent of Total)

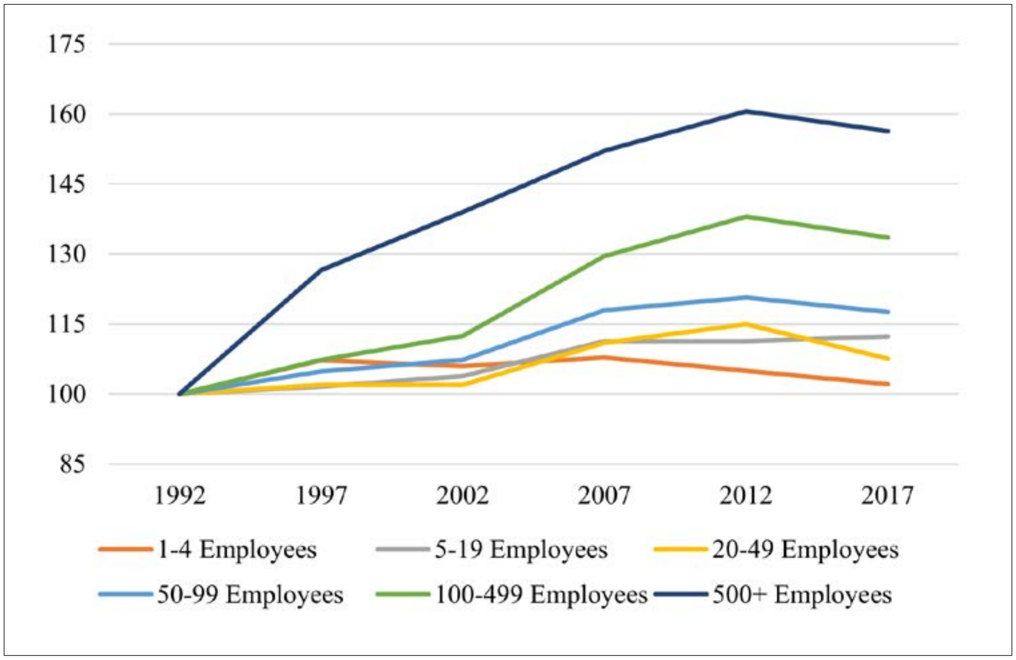


Source: Statistics of U.S. Businesses and Enterprise Statistics Program, Various Years, U.S. Census Bureau, author's calculations

The share of receipts going to small firms with fewer than 100 employees has been declining since 1963, while firms with between 100 and 499 employees have remained flat, as seen in Figure 2. The smallest sized firms experienced the largest decline. In 1963, firms with 1 to 4 employees garnered 9.8 percent of total receipts, but in 2017 this number had fallen to 4.2 percent. This amounts to a 57.2 percent decline in market share over the period. Firms with between 5 and 19 employees saw a similar magnitude decline, starting with a market share of 16.8 percent in 1982 and falling to 7.7 percent in 2017. Firms with between 20 to 49 and 50 to 99 employees saw a decrease in market share across the 54 years of 42.7 percent and 24.3 percent, respectively.[7]

[7] The receipt shares of all sizes of large firms have risen since 1963, though those with 10,000 or more employees have grown the fastest. In 1963, firms with at least 10,000 employees took in 23.8% of all receipts, while in 2017 their share had risen to 37.0%, which equates to a 55.7% increase in market share. Firms between 1,000 and 9,999 employes saw their receipt share rise from 15.0% to 22.1%, while those with between 500 and 999 employees saw their receipt share increase from 4.4% to 5.4%.

Figure 3: Real Receipts per Firm (Index 1992 = 100)



Source: Statistics of U.S. Businesses and Enterprise Statistics Program, Various Years, U.S. Census Bureau, author's calculations. To keep the graph legible, real receipts per firm are indexed to 1987 levels. Valuations above 100 indicate growth, while those below indicate decline.

Looking at shares of receipts for firms of a certain size potentially obscures the situation of the average firm, because the number of firms changes over time. Between 1992 and 2017, the U.S. economy added 1.4 million new small firms with employees.[8] The fastest growing group was firms with between 100 and 499 employees, which saw a 41 percent increase in the number of firms. In contrast, the slowest growing group was firms with between 5 and 19 employees, growing by just 17.7 percent.

To get a better sense of the average small firm's situation, Figure 3 shows the change in real receipts per firm in each group of small firms. From this frame of reference, average small firms of all sizes have higher receipts in 2017 than 25 years ago. Firms with less than 5 employees saw the smallest amount of growth at just 2.1 percent growth per firm, though for the past 10 years real receipts have been declining. The fastest growing group was firms with between 100 and 499 employees, which saw real receipts per firm increase by 33.5 percent over the 25 years. However, even this rate was far outpaced by large firms which saw average receipts grow by 56.3 percent.

While large firms are taking in a larger share of receipts, some of the change was brought about by initially small firms surpassing the 500-employee threshold to become classified as large firms. According to the SUSB, between 1992 and 2017, the number of large businesses increased from

[8] In 1992, the Economic Census expanded to it encompass nearly all economic activity outside of agriculture and government. Prior years excluded some industries, most notably Finance, Insurance, Real Estate, and parts of Transportation. While these exclusions cause only small differences in the fraction of receipts going to small businesses, they create a large difference in the receipts per firm. As such receipts per firm is only calculated since 1992. See Comparing Historical Economic Census Data for more details.

12,998 to 20,139, for a growth rate of 55 percent, faster than any other group. Although the increase in large firms were not all from small firms being reclassified after growth, the U.S. Census Bureau's Business Dynamics Statistics[9] (BDS) offers a way to quantify how many firms made the transition. Due to differences in methodology, the BDS finds a lower growth in the number of large firms from 15,926 to 22,044. The total change of 6,118 firms can be subdivided into three parts:

1. New firms that started with 500 or more employees, of which there were 2,910.
2. Firms with 500 or more employees which ceased operations, of which there were 3,987.
3. The net number of transitions between small and large firms, of which there are 7,195.[10]

In addition, 38,547 net firms grew past 99 employees, 152,103 grew past 19 employees, and 99,037 grew past four employees.

[9] Business Dynamics Statistics Datasets, U.S. Census Bureau

[10] This number is likely to be an underestimate as the BDS does not consider an acquired firm to have ceased operations. Thus, for every merger of firms between large businesses another small business must have grown to take its place.

Sector-level and Industry-level Variations

While the trend for all small firms in the U.S. is worrisome, it is also difficult to diagnose the cause by solely looking at the whole economy. Exploring the differences at the sector- and industry-level offers a chance to see more. Looking first at the changes in the percentage of receipts going to small firms by sector in Table 1, there are a wide range of outcomes over the 15-year period between 2002 and 2017.[11] The Health Care and Social Assistance sector saw small firms lose the most ground, falling from 44.6 percent of total receipts to just 35.7 percent. Other sectors with large decreases in small firm receipt share were Retail Trade (8.1 percentage point decrease), Education Services (8.0 percent decrease), and Wholesale Trade (7.3 percent decrease). Meanwhile a few sectors saw the fraction of revenue going to small firms increase. These sectors are Mining, Quarrying, and Oil and Gas Extraction (5.9 percentage point increase), Utilities (3.2 percent increase), Transportation and Warehousing (1.3 percent increase), Management of Companies and Enterprises (24.6 percent increase), and Accommodations and Food Services (0.3 percent increase). Despite coming from all corners of the economy, these sectors are relatively small accounting for just 8.4 percent of total small business receipts in 2017.

As with the economy, a declining share of small firms receipts at the sector level is not associated with a decline in total real receipts brought in by small firms. Rather, both the sector with the largest percentage decline in total small firm receipts, Management of Companies and Enterprises, and the sector with the largest percentage increase in total small firm receipts, Mining, Quarrying, and Oil and Gas Extraction, both saw increases in the share of receipts going to small firms.

[11] Due to the switch from the Standard Industrial Classification to the North American Industry Classification System (NAICS) at the turn of the millennium, it is difficult to compare sector- and industry-level data in the 1997 SUSB with that from 2002 onward. Therefore, comparisons dealing with sectors or industries will be made between 2002 and 2017.

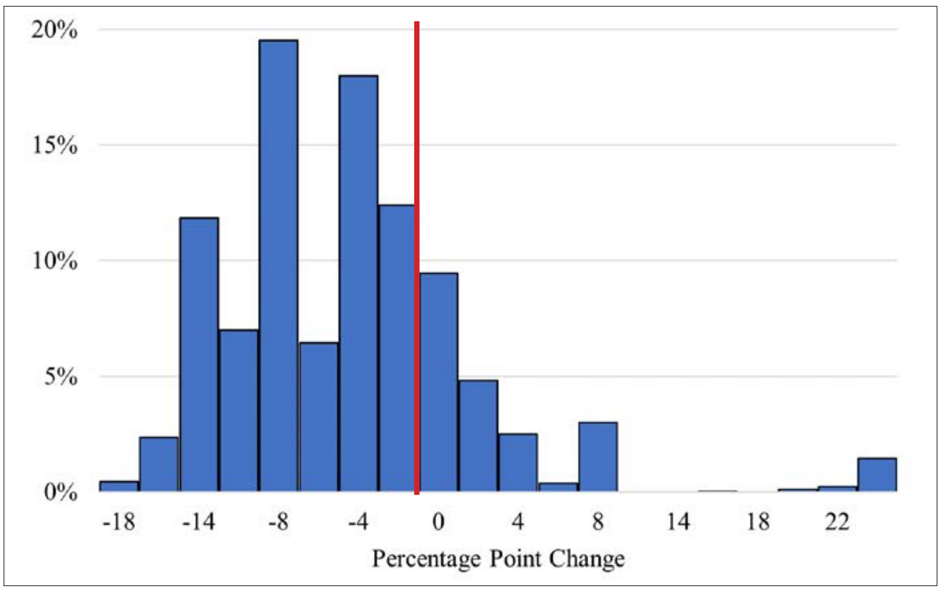
Table 1: Change in Small Firm Receipts by Sector

Sector	Total Sector Receipts 2002	Total Sector Receipts 2017	Total Sector Receipts Difference	Real Receipts ($ Billions) 2002	Real Receipts ($ Billions) 2017	Real Receipts ($ Billions) Difference
All Sectors	38.79%	35.64%	-3.15%	11,333.8	13,319.1	1,985.3
Agriculture, Forestry, Fishing and Hunting	87.41%	83.39%	-4.02%	29.9	29.0	-1.0
Mining, Quarrying, and Oil and Gas Extraction	20.79%	26.68%	5.89%	65.4	107.7	42.3
Utilities	14.90%	18.08%	3.17%	78.2	103.1	24.9
Construction	79.47%	75.75%	-3.72%	1,239.3	1,506.0	266.7
Manufacturing	24.75%	23.76%	-0.99%	1,290.4	1,312.6	22.1
Wholesale Trade	41.23%	33.96%	-7.27%	2,451.5	2,959.7	508.2
Retail Trade	47.59%	39.48%	-8.11%	1,975.5	1,931.3	-44.1
Transportation and Warehousing	35.20%	36.50%	1.30%	232.7	323.6	90.9
Information	16.36%	15.64%	-0.72%	188.5	246.5	58.0
Finance and Insurance	17.23%	14.83%	-2.41%	630.3	640.2	9.9
Real Estate and Rental and Leasing	62.66%	59.98%	-2.68%	290.9	398.3	107.4
Professional, Scientific, and Technical Services	60.43%	54.37%	-6.06%	755.5	1,004.5	249.0
Management of Companies and Enterprises	15.39%	39.97%	24.58%	63.8	48.0	-15.7
Administrative, Support, Waste Management and Remediation Services	45.98%	40.90%	-5.08%	278.5	391.0	112.4
Educational Services	41.47%	33.44%	-8.03%	99.0	137.2	38.2
Health Care and Social Assistance	44.62%	35.68%	-8.94%	721.6	902.8	181.1
Arts, Entertainment, and Recreation	63.98%	58.24%	-5.74%	125.0	156.2	31.2
Accommodation and Food Services	56.08%	56.37%	0.29%	331.7	531.5	199.8
Other Services (except Public Administration)	84.09%	81.62%	-2.48%	474.5	588.1	113.6
Industries not classified	99.99%	100.00%	0.01%	7.0	1.8	-5.2

Source: Statistics of U.S. Businesses, 2002 and 2017, U.S. Census Bureau, author's calculations. Receipts are deflated using the GDP Implicit Price Deflator to constant 2017 dollars.

Exploring the data at the finer industry-levels reveals that small firms in more areas are both gaining ground and falling behind. As seen in Figures 3 and 4, small firms faced a wider range of outcomes when looking at the 3- or 6-digit NAICS code instead of the sector-level. Of the 80 3-digit industries which could be matched between 2017 and 2002, 28 saw small firms increase their share of total receipts. Combined, these industries represented 22.0 percent of all receipts. At the same time, seven industries representing 14.7 percent of all receipts saw their small firms share decline by more than 10 percentage points. The variation is even greater when looking to the finest industry data in the SUSB, the 6-digit NAICS code. Of the 795 6-digit industries, 289 (37.6 percent of total revenue) saw the share of revenue going to small firms increase, while 213 (12.3 percent of total revenue) saw the share of small firms fall by 10 percentage points or more, and 79 (4.3 percent of total revenue) saw the share decline by more than 20 percentage points.

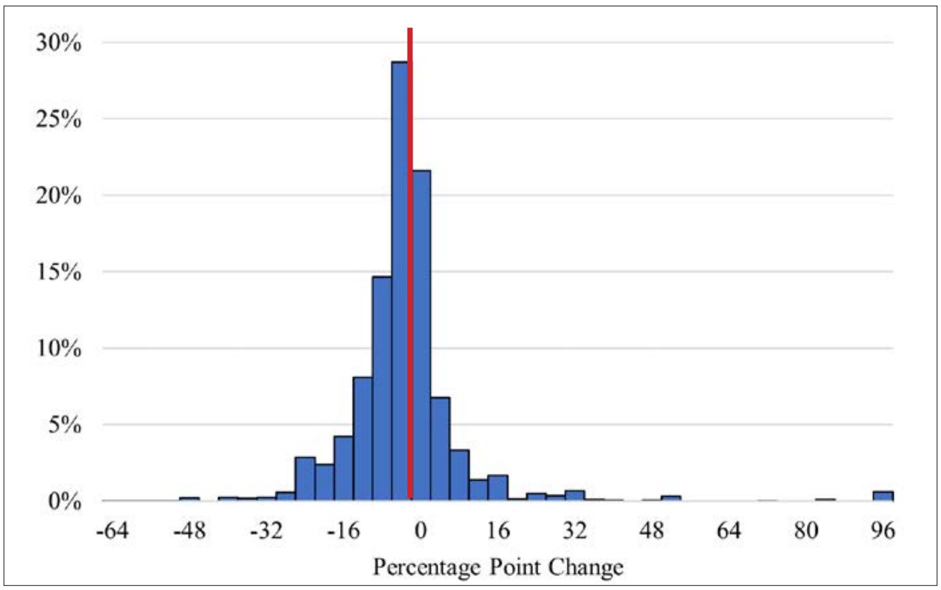
Figure 4: Change in Small Firm Share 2002-2017, NAICS 3-digit Industry



Source: Statistics of U.S. Businesses, 2002 and 2017, U.S. Census Bureau, author's calculations. Industries are weighted using total receipts from 2002. Bins are labeled according to their lowest value. For example, the 0 bin contains industries with a percentage point change in small firm share greater than or equal to 0 but less than 2. Bins to the right of the red line saw an increase in small firm receipt share.

Looking at more narrow industry categories shows not all industries grouped together in a sector follow the same trend. For example, while Hotels and Restaurants are combined into one NAICS sector, yet they have trended in opposite directions. Accommodations (NAICS 721) saw its share of small firm's receipts fall by 1.2 percentage points while Food Service and Drinking Places saw a rise of 0.9 percentage points. Other sectors such as manufacturing saw most of its industries increase their small firm share but a few large industries saw consolidation. In the case of manufacturing, Primary Metal Manufacturing (NAICS 331), and Petroleum and Coal Products Manufacturing (NAICS 324) each saw their small firm share fall by 1.2 percentage points. Meanwhile, most others saw increases including Apparel Manufacturing (22.9 percentage points), Beverage and Tobacco Products Manufacturing (8.7), Chemical Manufacturing (3.5), and Paper Manufacturing (1.0).

Figure 5: Change in Small Firm Share 2002-2017, NAICS 6-digit Industry

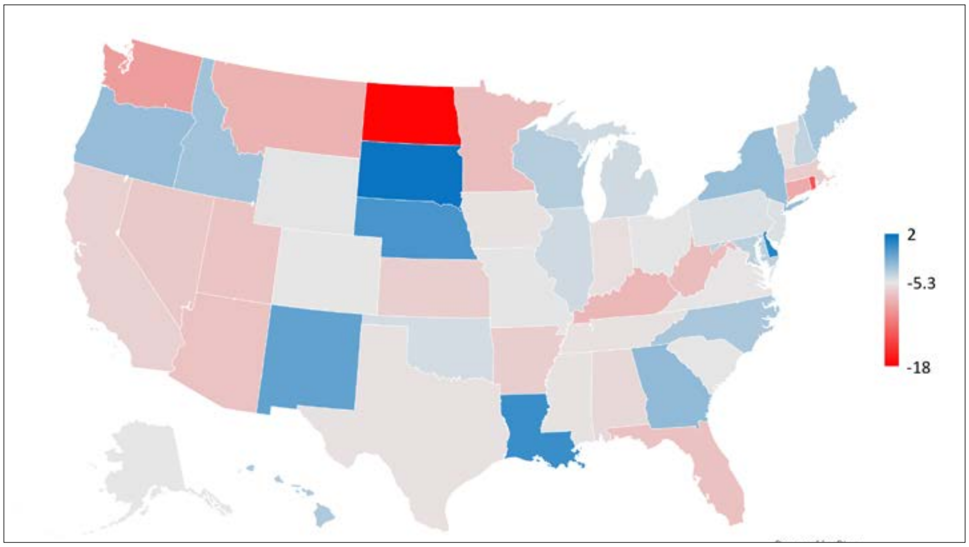


Source: Statistics of U.S. Businesses, 2002 and 2017, U.S. Census Bureau, author's calculations. Industries are weighted using total receipts from 2002. Bins are labeled according to their lowest value. For example, the 0 bin contains industries with a percentage point change in small firm share greater than or equal to 0 but less than 4. Bins to the right of the red line saw an increase in small firm receipt share.

State-level Variations

Another way to break down the trend is by geography. Figure 6 maps the change in small firm's share of receipts from 1997 to 2017.[12] While there is some variation between the states, only three states saw an increase in the percentage of receipts going to small firms: Delaware (0.8 percentage point increase), Louisiana (0.2), and South Dakota (1.7), all of which were minor. The other 47 states and Washington, D.C. experienced a decline in the percentage of receipts going to small firms. The two states with the most significant decline were North Dakota (17.8 percentage point decrease) and Rhode Island (13.3 percent decrease). Most states' declines were close to the national average of 5.3 percentage points. Nineteen states were within one percentage point and 32 states were within two.[13]

Figure 6: State Changes in Small Firm Share 1997-2017



Source: Statistics of U.S. Businesses 1997 and 2017, U.S. Census Bureau, author's calculations. The percentage point decline for D.C. is 7.8. The nationwide decline for the period was transition point between red and blue is set at the nationwide average of a 5.3 percentage point decline in small firm share over the 20-year period.

While it is interesting to see which states have the largest rises and falls in small firm share, it would be a mistake to suggest that general state policies are responsible for the changes. Rather it is the composition of industries within the states that is of greater importance. Consider North Dakota, the state with the largest decline. With the development of new drilling techniques, including horizontal drilling and fracking, North Dakota was able to see a rapid growth in its natural resource extraction industries (NAICS sector 21).[14] Between 2002 and 2017, receipts in this sector grew 1,137 percent, expanding from just from just 3.1 percent of statewide receipts to 17.1 percent even as the state's

[12] The Enterprise Statistics Program did not record receipts by state and firm employment, so only years from 1997 onwards can track the state-level variation.

[13] The changes for all states can be seen in Table A.1 at the end of this brief.

[14] Shale boom turns North Dakota into No. 3 oil producer, Reuters

economy grew rapidly. Because this sector is also one with a low concentration of small firms the overall decline can be explained by the evolving industry composition.[15]

To formally test the proposed hypothesis, an analysis of variance (ANOVA) test was run on the change in the small firm share of receipts between 2002 and 2017 for each state and NAICS 3-digit industry combination. The results are seen in Table 2 below. The state plays a minor role only explaining 2.3 percent of the total variation, while the industry explains 45.4 percent. This decomposition suggests that state policies play only a small part in explaining the variation among them, rather than the collection of industries that are located within its border, that primarily determines how small firms' share of receipts has evolved.[16]

Table 2: Percent of State-Industry Variation Explained (ANOVA Test)

Group	State	Industry	Both
State	2.26%	N/A	2.07%
Industry	N/A	45.42%	45.23%
Total	2.26%	45.42%	47.49%

NOTE: 3,522 state-industries are used. Some state-industries combinations have no receipts and are thus excluded. Source: Statistics of U.S. Businesses, 2002 and 2017, U.S. Census Bureau, author's calculations. Observations were weighted according to total receipts in 2002.

[15] The other states with large swings also saw a change in industry composition. Rhode Island saw Finance and Insurance (NAICS sector 52) have real receipt growth of more the 77% between 2002 and 2017. Conversely, South Dakota experienced a 53% decline in the Finance and Insurance sector. Delaware saw a 97% decline in Management of Companies and Enterprises (NAICS sector 55) while seeing a 52% increase in Finance and Insurance. Finally, Louisiana saw a 50% decrease in Mining, Quarrying, and Oil and Gas Extraction (NAICS sector 21).

[16] Conducting a similar ANOVA test on the fraction of receipts going to small businesses in 2017 reveals that the sector plays an even larger role. Just 1.6% of variation can be explained by the state, while 84.7% can be explained by the industry.

Conclusion

The declining share of economic activity passing through small firms is a complex topic that cannot be fully explored in a brief such as this one. Still, there are important takeaways which can be incorporated into further study. First, the aggregate decline has persisted for a long time. Second, the trend is most pronounced when looking at the smallest sized firms (>100 employees). Third, industries range widely in their change in small firms receipt share and small firms actually increase their share of receipts in more than one-third of the economy. Finally, while there is some variation between states, it appears that the industrial composition of a state plays a major factor.

While the data in the Economic Census through 2017 paints a pessimistic picture for small businesses, more recently available sources allude to the negative trend reversing. New business applications have risen dramatically since the COVID-19 pandemic began.[17] On average 430,657 business application have been filed each month since April of 2020. Between 2016 and 2019, the U.S. averaged only 273,260 applications a month. Small firms have also led the way in terms of job recovery since the pandemic with small firms adding 8.0 million net jobs between September 2020 and March 2023, while large firms only added 7.1 million.[18] Only time and more data will reveal the full extent of these changes.

Further understanding can also be developed by uncovering the causes which lead to small firms to take in a smaller percentage of revenue. Factors such as economic growth, economies of scale, increasing regulatory burden, and new firm entry may explain the industry-level patterns noticed in this brief.

[17] Business Formation Statistics, U.S. Census Bureau

[18] Business Employment Dynamics, U.S. Bureau of Labor Statistics

Appendix

Table A.1: Change in Small Firm Receipts by State

State	Total Sector Receipts 1997	Total Sector Receipts 2017	Total Sector Receipts Difference	Real Receipts ($ Billions) 1997	Real Receipts ($ Billions) 2017	Real Receipts ($ Billions) Difference
U.S. Total	40.94%	35.64%	-5.30%	10,770.4	13,319.1	2,548.7
Alabama	40.98%	34.92%	-6.06%	138.3	163.3	25.0
Alaska	43.02%	37.71%	-5.31%	22.6	29.0	6.4
Arizona	39.80%	32.59%	-7.21%	140.4	195.4	54.9
Arkansas	43.41%	36.81%	-6.60%	85.8	98.2	12.4
California	44.92%	38.44%	-6.48%	1,373.7	1,825.7	452.0
Colorado	41.72%	36.40%	-5.32%	163.7	233.4	69.7
Connecticut	42.03%	33.50%	-8.53%	185.2	179.6	-5.6
Delaware	26.60%	27.36%	0.76%	31.4	40.0	8.6
District of Columbia	35.17%	27.41%	-7.76%	38.9	61.5	22.6
Florida	45.81%	38.52%	-7.29%	530.0	723.2	193.2
Georgia	35.28%	32.70%	-2.57%	294.1	379.7	85.6
Hawaii	44.97%	41.45%	-3.52%	36.3	49.5	13.2
Idaho	46.20%	43.09%	-3.11%	42.2	60.2	17.9
Illinois	38.79%	34.24%	-4.55%	552.4	603.7	51.4
Indiana	38.20%	32.47%	-5.72%	223.3	249.5	26.2
Iowa	40.56%	35.03%	-5.54%	119.1	140.6	21.4
Kansas	41.14%	34.59%	-6.55%	108.1	124.5	16.4
Kentucky	37.04%	29.18%	-7.86%	129.5	142.0	12.4
Louisiana	35.84%	35.99%	0.16%	144.2	188.6	44.5
Maine	48.49%	45.20%	-3.29%	41.7	50.5	8.8
Maryland	44.54%	40.61%	-3.93%	178.5	235.9	57.4
Massachusetts	42.48%	35.86%	-6.62%	310.3	344.6	34.3
Michigan	39.28%	34.74%	-4.54%	398.9	398.2	-0.7
Minnesota	42.00%	34.45%	-7.55%	231.3	271.7	40.4
Mississippi	42.20%	36.69%	-5.51%	73.7	80.7	7.0
Missouri	38.14%	32.90%	-5.25%	209.4	231.6	22.3
Montana	60.27%	52.17%	-8.10%	31.6	46.0	14.3
Nebraska	34.53%	34.26%	-0.27%	66.8	88.9	22.0
Nevada	43.97%	37.06%	-6.91%	62.8	92.6	29.8
New Hampshire	46.58%	42.49%	-4.09%	51.4	61.3	9.9
New Jersey	42.24%	37.30%	-4.95%	417.8	472.2	54.4
New Mexico	41.38%	40.30%	-1.08%	46.5	55.1	8.5
New York	43.31%	40.51%	-2.80%	914.8	1,046.1	131.3

	Total Sector Receipts			Real Receipts ($ Billions)		
State	**1997**	**2017**	**Difference**	**1997**	**2017**	**Difference**
North Carolina	36.77%	33.37%	-3.40%	271.7	336.8	65.1
North Dakota	58.57%	40.73%	-17.84%	28.6	49.5	20.9
Ohio	37.80%	32.59%	-5.21%	426.3	429.5	3.3
Oklahoma	44.57%	39.88%	-4.69%	109.2	141.1	31.9
Oregon	45.80%	43.03%	-2.78%	142.4	167.6	25.2
Pennsylvania	39.68%	34.72%	-4.97%	454.1	517.6	63.5
Rhode Island	52.24%	38.92%	-13.32%	38.2	42.7	4.5
South Carolina	38.00%	32.73%	-5.26%	115.0	151.8	36.9
South Dakota	47.17%	48.87%	1.69%	31.5	45.5	14.0
Tennessee	38.08%	32.51%	-5.58%	191.8	229.9	38.0
Texas	36.94%	31.37%	-5.57%	738.0	1,162.1	424.1
Utah	44.38%	37.20%	-7.18%	74.8	117.6	42.8
Vermont	55.40%	49.79%	-5.61%	25.5	30.4	4.9
Virginia	37.32%	31.97%	-5.35%	221.3	298.6	77.2
Washington	44.75%	35.48%	-9.26%	228.7	310.4	81.7
West Virginia	40.62%	33.05%	-7.57%	44.5	44.9	0.4
Wisconsin	41.24%	37.51%	-3.73%	216.0	254.3	38.3
Wyoming	47.40%	42.23%	-5.17%	17.9	26.0	8.1

Source: Statistics of U.S. Businesses,1997 and 2017, U.S. Census Bureau, author's calculations. Receipts are deflated using the GDP Implicit Price Deflator to constant 2017 dollars.