The Service Sector and the "Great Recession"– A Fifth District Perspective

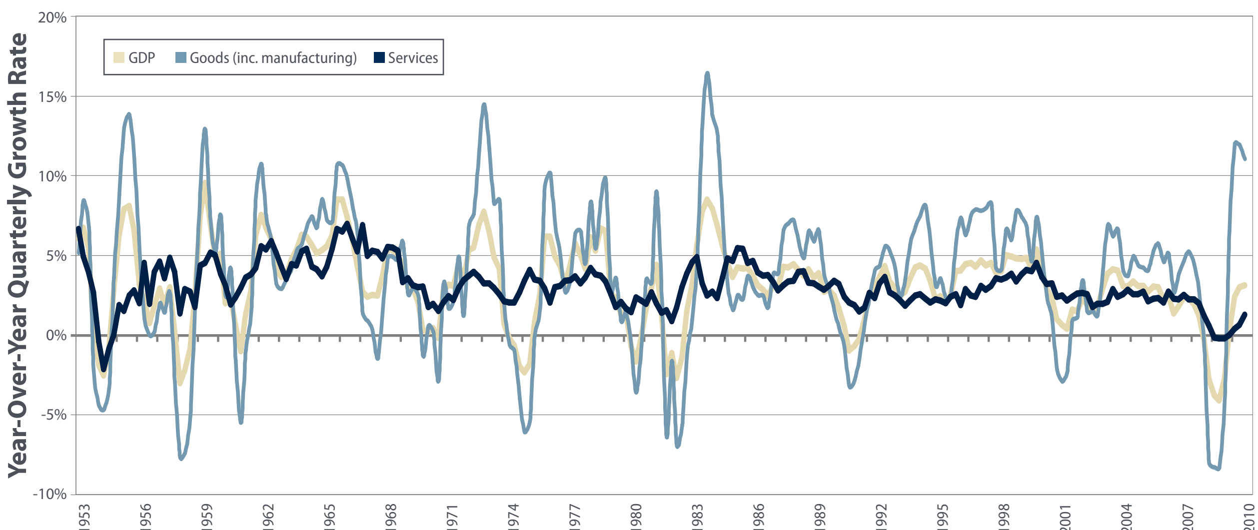
By Robert H. Schnorbus and Aileen Watson

The recent recession had a lasting effect on the service sector, both nationally and in the Fifth District. The Fifth District Service Sector Index of Revenues provides valuable insights into the nature of the service sector's downturn, and its links to downturns in other markets. In particular, breaking down the aggregate index into its component industries reveals important differences in each subsector's decline and relative recovery.

While the manufacturing sector has historically been more acutely affected by business cycles, the most recent recession has touched the service sector on a scale that is perhaps unprecedented since the Great Depression. Indeed, until the onset of the 2007–09 recession, growth in the services component of real gross domestic product (GDP) had not experienced a period of negative year-over-year growth since the Korean War—a period encompassing 10 recessions.

The shift to a service sector economy over the last 50 years in the wake of rising real incomes is well documented, but our understanding of the nature and scope of the sector's recent decline is only just beginning to emerge.[1] Because this recession was triggered by a housing slump that transformed into a full-fledged financial crisis, certain sectors that are heavily dependent on credit availability, such as real estate and retail trade, were particularly vulnerable. Unfortunately,

Figure 1: Economic Growth by Major Sectors



Source: Bureau of Economic Analysis, National Income and Product Accounts beyond employment data, timely economic data that might allow an examination of the recession's effect on businesses at a regional level are limited.

The Federal Reserve Bank of Richmond has a useful tool to analyze the recession's effect on service sector activity: the Fifth District Service Sector Survey of Business Activity.[2] (The Fifth District includes Maryland, the District of Columbia, Virginia, North Carolina, South Carolina, and most of West Virginia.) This survey, which was started in the mid-1990s, consists of a cross-section of over 100 businesses operating in our District and is used to construct diffusion indexes of such economic measures as revenues, employment, and prices in the District's service sector. The indexes are based on a calculation of the percent of respondents who report increasing activity minus the percent who report decreasing activity. While a diffusion index technically captures only the breadth of change (that is, how many firms at a given time are expanding or contracting), it can closely approximate a growth rate in terms of both turning points and magnitude. While measures of economic activity can be found in state employment statistics, which are a measure on the input side of the production process, revenue data are a more comprehensive measure of output activity. Our survey is the only source for such data on a timely enough basis to examine the impact that the recent recession had on the District's service sector. What that survey is telling us today is that the recession's impact has been substantial, but far from uniform in either timing or magnitude across all industries in the service sector.

This *Economic Brief* will examine how the recession spread through the Fifth District's service sector and how the recovery to date has been unfolding, based on a decomposition of the District's service sector survey into five key subsectors: (1) construction and real estate, (2) retail trade, (3) professional business and banking services, (4) health and education, and (5) leisure and hospitality.[3] Each has a different story to tell about the recession, depending on its proximity to credit and housing activity. The findings are generally consistent with what might be expected based on a subsector's links to the driving forces of the recession. Still, it is instructive to see how differently these subsectors behaved during the recession and subsequent recovery, and what those differences reveal about the nature of the District's overall service sector.

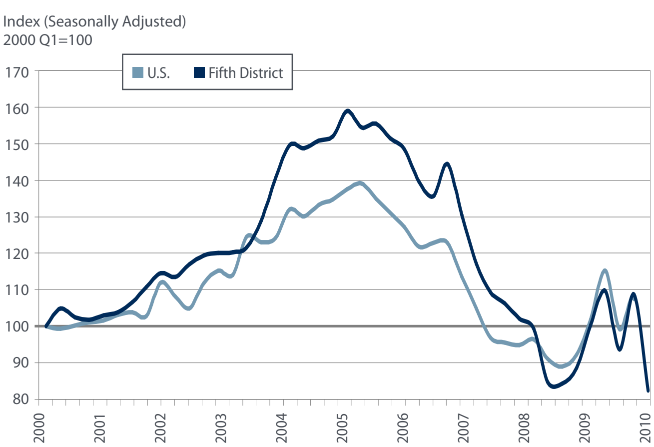
The "Great Recession" and the Fifth District Economy

The most recent recession officially began in the fourth quarter of 2007, but its roots began much earlier with the end of the housing boom and its spillover effects on other sectors of the national and District economy. Using year-over-year growth of existing home sales as a simple proxy for overall housing activity, the national housing market peaked in the third quarter of 2005 and started recording year-over-year declines by the first quarter of 2006—more than a year before the recession began for the rest of the economy. The market's decline lasted until the third quarter of 2009, roughly three times longer than the actual recession itself. At its most intense, in the fourth quarter of 2007 and first quarter of 2008, the housing sector was already declining at a more than 20 percent year-over-year rate as the rest of the economy was just entering the recession. It continued to experience year-over-year declines for well over a year into the recession.

The housing market, however, was not alone in experiencing an early and substantial decline prior to the official start of the recession. The retail market was heavily influenced by automotive-related spending (which alone has historically averaged a little more than 6 percent of total consumption in the GDP accounts). The auto market closely follows the housing cycle and is greatly dependent on the availability of credit; not surprisingly, a good time to buy housing is also a good time to buy durable goods, such as new vehicles. Like housing, automotive sales peaked in the third quarter of 2005 and did not stop declining until the second quarter of 2009—a decline that was roughly three times greater than the market's average recessionary decline in terms of vehicle units sold. And, as in housing, the early stage of that decline was relatively moderate, but sales plummeted as the recession took on the characteristics of a financial crisis in the third quarter of 2008. The resulting decline of the retail market was another major contributing factor in the severity of the recession.

In the Fifth District, declines in both housing and auto sales were roughly proportional to the national experience. Unfortunately, our District's above-average economic growth over the last decade, relative to the nation, seems to have done little to buffer its economy from the recession. Indeed, it may have been the case that above-average economic growth prior to the recession led to above-average declines during the recession. For example, in the District's housing sector, existing home sales experienced 10.2 percent quarterly growth from the first quarter of 2002 to the fourth quarter of 2005, compared to only 7.5 percent for the nation. Then the District's housing sector suffered a 14.4 percent decline from the first quarter of 2006 to the second quarter of 2009, compared to only a 10.4 percent decline nationally. The decline in District auto sales was comparable to the national experience. Both housing and autos declined far below what might be expected in an average recession, leaving little room for regional differentiation. These markets faced a severe lack of consumer demand and credit availability. Consumers, regardless of their relative wealth or sense of job security, were basically unable or unwilling to buy homes or new vehicles.

Figure 2: Existing Home Sales

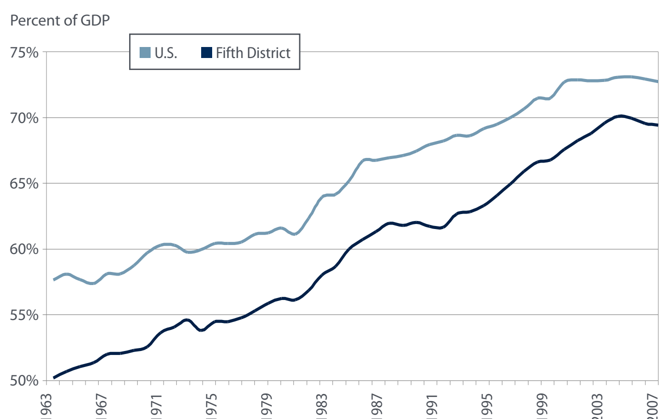


Source: National Association of Realtors ®

The Fifth District Economy and Its Service Sector

Perhaps more than the nation as a whole, the Fifth District's economy has benefited from the growth of the service sector as the country's population has shifted to the South and incomes in the region have risen. Net in-migration may have been induced in part by an influx of manufacturing businesses, but expanding manufacturing jobs brought with them a booming demand for housing and both consumer and business services. As a result, the District's service sector (including the construction industry) increased as a share of total District output by roughly 20 percentage points between 1965 and 2006, rising from only half of the economy to over two-thirds in terms of output. While the District's concentration in services has remained below the national average, that gap has been narrowing over time as the District's service sector has grown at a somewhat faster pace than the nation's. Some of the service jobs that the District gained might have been for local use, but many were also for the export of services, especially financial services, to other regions of the country. (It is worth noting that the Fifth Federal Reserve District is the second largest of the 12 Federal Reserve Districts in terms of asset holdings of its member banks.)

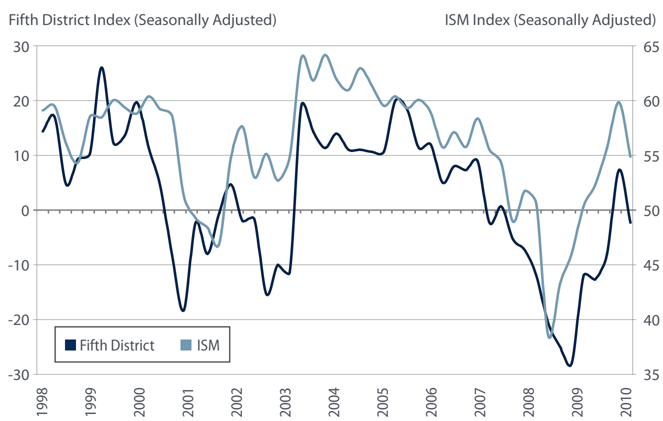
Figure 3: Service Sector Share of GDP



Source: Bureau of Economic Analysis
Note: Industry classifications changed from SIC (Standard Industrial Classification) to NAICS (North American Industry Classification System) in 1997. Historical data contain a discontinuity where the change occurred. The authors calculated the difference between the two series to create a continuous series that roughly approximates how the NAICS series would look if data were available prior to 1997.

The very nature of the recent recession—triggered by a sharp decline in the housing market and a dramatic tightening of financial credit—has created difficulties for large and small businesses alike in the District's service sector. Historical comparisons are limited by the fact that the survey goes back to only the early 1990s, but the District's service sector index of revenues follows a pattern similar to the national Institute for Supply Management (ISM) non-manufacturing business activity index (also a diffusion index of responding firms).[4] While the two measures are not perfectly comparable, they are in essence measuring the same thing—activity in an expanded service sector that includes construction. Both show a recessionary impact that is severe and prolonged by historical standards. Using revenues as a proxy for economic output at the subsector level since 2001, the sensitivity of the District's service sector to changes in economic activity at an industry level can be evaluated. To see how effects of the recession were distributed and transmitted across the District's service sector, we examine each of the five subsectors separately in relation to total service sector revenue performance.[5]

Figure 4: Comparison of Fifth District Service Sector Revenue Index with ISM Non-Manufacturing Business Activity Index



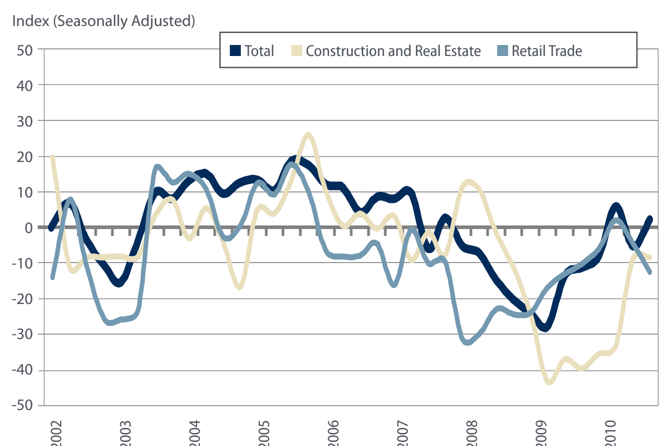
Source: Fifth District Survey of Service Sector Activity and ISM Non-Manufacturing Report on Business ®
Note: The ISM index is calculated similarly to the Fifth District index, except that the ISM index includes one-half of the percentage reporting no change, while the District index includes all respondents reporting no change.

Subsector Performance in Recession and Recovery

The **construction and real estate** subsector is most closely linked to activity in the housing market, and thus is expected to be highly sensitive to changes in housing activity. Indeed, the subsector roughly follows the pattern of total revenues with two key exceptions. First, its revenue index turned negative in early 2007, ahead of the total index, as the housing market began its slide into recession. Second, the subsector recovered briefly in the early part of 2008, as the total index continued to decline. Only when the financial crisis took hold in 2009 did the subsector begin to decline in earnest. The reason for the delay may be that, even though housing sales were already starting to weaken, developers continued to build new homes and commercial buildings on the expectation that the recession would be no worse than past downturns, and that financial credit would be relatively available. Interestingly, the subsector index shows that revenues continued to contract (albeit at a steadily slower pace) after the recession ended in mid-2009, which is consistent with a continuation of tight credit and depressed conditions in the housing market.

While slightly more removed from the direct effects of the housing slump, the **retail trade** subsector suffered the longest period of revenue contraction of any subsector, and at the end of 2010 it still has not turned the corner. Depressed housing sales most likely kept furniture and appliance purchases to a minimum, and the decline of automotive sales only added to the subsector's problems. Indeed, like the automotive cycle, the retail subsector started to decline long before the recession officially began, and proceeded to decline at a much faster rate than the overall revenue index over the entire course of the recession. Most likely, just the fear of losing one's job was enough to induce consumers to increase their savings and avoid big-ticket purchases as much

Figure 5: Subsector Indexes

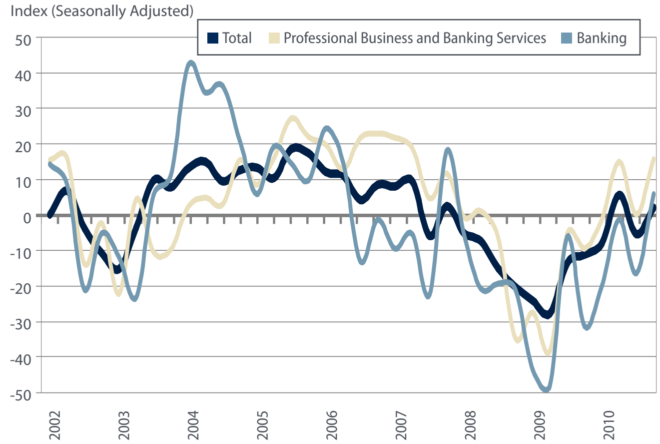


Source: Fifth District Survey of Service Sector Activity as possible. Even though the recession has officially ended, the retail subsector has yet to enter a solid recovery phase. Revenues have essentially stopped declining, but the combination of a weak employment recovery and tight credit are probably continuing to constrain consumers' ability to consume at a pace near pre-recession levels.

Each of the remaining three subsectors seems to have had a different experience during both the recession and the subsequent recovery. For example, the **professional business and banking services** subsector was also likely to feel the effects of changes in the housing market, to the extent that declining demand for housing caused banks to need fewer loan officers, and developers to need fewer lawyers, engineers, and accountants. The strength of the ties between housing and banking is evident when the banking portion is broken out separately from the entire subsector. Although the sample size is too small to make too much of the comparison, banking revenues in the District started to contract well before the District's service sector as a whole, and the declines were roughly three times greater. However, with ties to other industries (including a relatively robust manufacturing sector), the revenue index for the entire subsector experienced a more solid expansion prior to the official start of the recession, and only began to experience severe revenue contraction in 2008 as the recession took hold across the entire District economy. Moreover, unlike the construction and real estate subsector, professional business services have fully shared in the recovery of revenues that District service sector firms in aggregate have experienced. Indeed, even banks appear to have done well during the recovery.

Arguably, the hardest hit of all the subsectors without a direct link to the housing and retail markets has been the travel-related **leisure and hospitality** subsector. Based on its revenue index, travel was experiencing strong expansion of revenues during 2004 and 2005—well above all the other subsectors. However, once the housing and retail slump got underway, both business and consumer travel declined quite rapidly. With that decline, revenues for the subsector began to contract. By the official start

Figure 6: Subsector Indexes

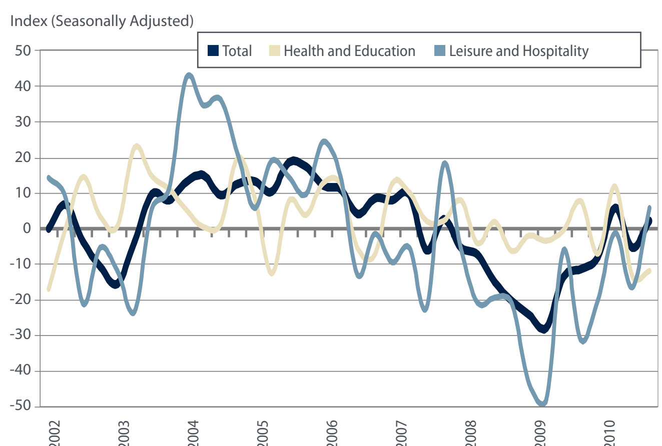


Source: Fifth District Survey of Service Sector Activity

of the recession, revenues were already contracting sharply, with the index registering nearly twice the negative values as the total index. "Stay-cation" became a common expression during the worst of the sector's decline, as consumers opted for staying close to home rather than visiting seashore and mountain resorts. And while the subsector has been improving substantially since hitting a low point in early 2009, its revenues have continued to contract. Only in the final quarter of 2010 has the subsector been able to post an increase in revenues, and it is too early to say if that will be sustained.

Finally, and perhaps not too surprisingly, the subsector least affected by the recession has been **health and education**. According to this subsector's revenue index, business activity has been enjoying fairly

Figure 7: Subsector Indexes



Source: Fifth District Survey of Service Sector Activity stable growth over the last decade. To be sure, its revenue index turned slightly negative in 2008, but it then turned moderately positive at the end of 2009. Still, this subsector was recording a severe contraction in the second half of 2010, when most other subsectors were significantly slowing their rate of revenue contraction. Most likely, some consumers postponed medical and dental procedures if possible, but there are limits to people's propensity to neglect problems for very long. With respect to the education industry, many laid-off workers may have decided to return to college and vocational schools to be retrained. If so, that shift may be ending now, reducing the influx of students. In any case, no matter how "recession proof" a subsector may have seemed, this recession was eventually able to catch up with it.

Conclusion

Despite strong underlying trend growth, the service sector has always had some exposure to the business cycle. However, the combination of a housing slump, highly indebted consumers, and tight credit has brought hard times to virtually every corner of the Fifth District's service sector. In this *Economic Brief*, we examined the recession's impact on five different subsectors in the District, and found that all have suffered revenue losses to some degree (as measured by the net percentage of firms reporting a decline in their revenues). As might be expected, the subsectors closest to the housing slump tended to have the longest and deepest revenue contractions. However, even subsectors with little direct link to the housing or financial crises, such as health and education, eventually felt the spillover effects from discouraged and financially weakened consumers.

The breadth and depth of the recession's impact produced unprecedented weakness and decline in the District's service sector, and the recovery from the recession so far has been painfully slow. Indeed, most subsectors are still experiencing net revenue contractions, six quarters since the official phase of the recovery began in mid-2009. The recent sluggishness of what has historically been the strongest sector of the District and national economy clearly indicates that a full recovery may not emerge for some time. Yet the fact that the worst of the recession's effects on the District seems to have passed, and progress is being registered in the relative improvements of even the hardest-hit subsectors, suggests that the healing process is underway. ■

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Endnotes

1 See, for example, Robert H. Schnorbus, "Small business employment in the Fifth District and the impact of recessions," *Region Focus*, First Quarter 2010, pp. 36–43.

2 The survey is available online at http://www.richmondfed.org/research/regional_economy/.

3 While normally considered part of the goods-producing sector, construction firms are included in the Fifth District's survey. Because of their obvious importance to the housing and financial crises, we have retained them as part of this service-producing sector analysis.

4 The ISM Non-Manufacturing Report on Business® is available at http://www.ism.ws/ISMReport.

5 The subsectors could only be constructed back to 2002 due to the lack of electronic recording of individual survey responses. The fourth quarter of 2010 is based on the average of the first two months of that quarter.