

# US Macro Report

**Employment Insight**

**May 2017**



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## Introduction

### Avalanche of data

Everything and anything is being measured and broadcast, for a fee, in real time. You can get daily car sales estimates, by model. How? Before you can drive off in your newly purchased car you need to provide proof of insurance. So the insurance company knows when you bought a new car. And they sell that information to anyone who is willing to pay for it.

So you could know exactly how many Honda Civics were sold by the middle of the month. You can make a pretty good guess about overall car sales before they are released during the first few days of the following month. But does that information advantage really help?

I have a feeling the overall market trend is much more important and simply overwhelms any influence such micro-data might have (apart from a short-term blip).

But there is some data freely available<sup>1</sup> worth further scrutiny. The Bureau of Labor Statistics releases each month a very detailed employment report based on actual payroll data from a huge sample of 147,000 businesses. The numbers are so good that a month-on-month change of more than 100,000 employees (out of 146 million, or less than a tenth of a per cent) is statistically significant.

Recently I stumbled over a headline stating the retail sector lost more jobs in the past two months (60,000 employees) than the workforce in the entire US coal industry. So I thought there is probably some value in digging deeper into the numbers by sector.

Government jobs are quite recession-resistant, and so might other sectors of the economy. Some sectors might show a decline in employment earlier than others.

If the US economy loses some manufacturing jobs with good benefits (health insurance, pension) to China and gains an equal number of jobs in the lowly paying fast-food industry (no minimum wage for waitresses, often no benefits) this would not show up in the overall number of jobs. But it would have serious repercussions for disposable income, and hence consumption.

So let's dig right in.

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<sup>1</sup> The US government is not allowed to charge for any research. The Bureau of Labor Statistics has an annual budget of USD 640 million, about ten times the amount Eurostat spends.

# Lighthouse Investment Management

## Employment Overview

Employees in Thousands	Employment	Change in Employment m/m						Change in Employment m/m (in % of total)					
	Mar-17	Mar	Feb	Jan	Dec	Nov	Oct	Mar	Feb	Jan	Dec	Nov	Oct
Total Non-Farm	145,858	98	219	216	155	164	124	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%
Total Government	22,318	9	-2	12	5	-14	-8	0.0%	0.0%	0.1%	0.0%	-0.1%	0.0%
Total Private	123,784	263	245	268	201	226	62	0.2%	0.2%	0.2%	0.2%	0.2%	0.0%
Goods Producing	19,969	28	96	51	32	35	9	0.1%	0.5%	0.3%	0.2%	0.2%	0.0%
Manufacturing	12,392	11	26	12	18	0	-5	0.1%	0.2%	0.1%	0.1%	0.0%	0.0%
Durable Goods	7,737	11	8	10	13	3	-1	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%
Non-Durable Goods	4,655	0	18	2	5	-3	-4	0.0%	0.4%	0.0%	0.1%	-0.1%	-0.1%
Construction	6,882	6	59	34	12	28	16	0.1%	0.9%	0.5%	0.2%	0.4%	0.2%
Service Providing	103,571	61	125	153	118	143	123	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Trade, Transport & Utilities	27,359	-27	-16	28	28	15	9	-0.1%	-0.1%	0.1%	0.1%	0.1%	0.0%
Utilities	554	-1	-1	-1	0	0	0	-0.1%	-0.1%	-0.1%	0.0%	0.1%	0.1%
Transport & Warehousing	5,047	4	8	-13	13	22	12	0.1%	0.2%	-0.3%	0.3%	0.4%	0.2%
Wholesale Trade	5,902	0	8	6	2	6	4	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%
Retail Trade	15,856	-30	-31	35	13	-13	-7	-0.2%	-0.2%	0.2%	0.1%	-0.1%	0.0%
Professional and Business Services	20,567	56	36	59	36	46	55	0.3%	0.2%	0.3%	0.2%	0.2%	0.3%
Education & Health Care	22,970	16	66	17	50	31	45	0.1%	0.3%	0.1%	0.2%	0.1%	0.2%
Education	3,624	-1	30	-8	11	2	4	0.0%	0.8%	-0.2%	0.3%	0.1%	0.1%
Health Care & Social Assistance	19,346	17	37	25	39	28	42	0.1%	0.2%	0.1%	0.2%	0.1%	0.2%
Leisure & Hospitality	15,795	9	27	15	5	44	11	0.1%	0.2%	0.1%	0.0%	0.3%	0.1%
Financial Activities	8,409	9	6	30	22	12	6	0.1%	0.1%	0.4%	0.3%	0.1%	0.1%
Finance and Insurance	6,223	8	3	18	19	3	6	0.1%	0.0%	0.3%	0.3%	0.1%	0.1%
Real Estate, Rental & Leasing	2,186	1	4	12	4	8	1	0.0%	0.2%	0.5%	0.2%	0.4%	0.1%
Information	2,747	-3	-4	-8	-6	-12	-6	-0.1%	-0.1%	-0.3%	-0.2%	-0.4%	-0.2%
Other Services	5,724	1	10	12	-17	7	3	0.0%	0.2%	0.2%	-0.3%	0.1%	0.1%

Source: Bureau of Labor Statistics, own calculations. © Lighthouse 2017

The first column in above table shows employment by sector in thousands, followed by changes in employment (month-on-month) over the last six months in absolute terms (thousands) as well as in percentage terms (per cent of total sector employment).

Observations:

- Out of a total US population of 326.5 million less than half (44.7%) are employed<sup>2</sup>
- Government jobs make up around 15% of employment
- Service sector jobs make up 83.7% of private (non-government) sector employment
- Private sector employment has recently seen moderate growth with the exception of retail (61,000 job lost in February and March) and the information sector (39,000 lost over past 6 months)
- Strongest sectors are Professional & Business Services, Education & Healthcare (not cyclical) and Construction (cyclical).

<sup>2</sup> Farm-workers are seasonal and hard to count (some undocumented immigrants) and hence not included

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## Employment Trends and Wages

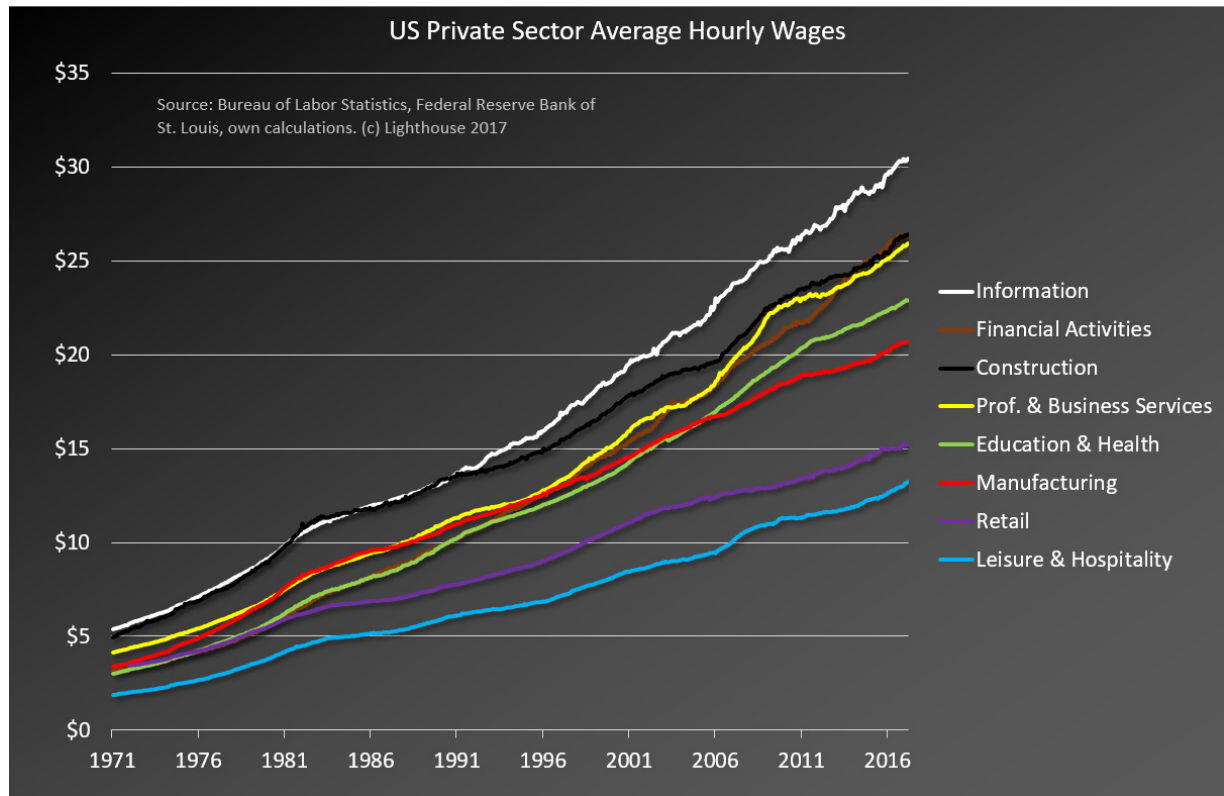
Employees in Thousands		Employment	year ago	change	% change	10 yrs ago	change	% change	Hourly earnings
		Mar-17	Mar-16			Mar-07			
Total Non-Farm		145,858	143,673	2,185	1.5%	137,785	8,073	6%	n.a.
Total Government		22,318	22,166	152	0.7%	22,149	169	1%	n.a.
Total Private		123,784	121,507	2,277	1.9%	115,636	8,148	7%	21.90
Goods Producing		19,969	19,752	217	1.1%	22,391	-2,422	-11%	22.93
Manufacturing		12,392	12,355	37	0.3%	13,970	-1,578	-11%	20.69
Durable Goods		7,737	7,736	1	0.0%	8,871	-1,134	-13%	21.65
Non-Durable Goods		4,655	4,619	36	0.8%	5,099	-444	-9%	19.14
Construction		6,882	6,705	177	2.6%	7,706	-824	-11%	26.39
Service Providing		103,571	101,755	1,816	1.8%	93,245	10,326	11%	21.73
Trade, Transport & Utilities		27,359	27,167	192	0.7%	26,596	763	3%	19.24
Utilities		554	556	-1	-0.2%	549	5	1%	36.32
Transport & Warehousing		5,047	4,958	89	1.8%	4,535	511	11%	21.14
Wholesale Trade		5,902	5,856	46	0.8%	5,987	-85	-1%	24.51
Retail Trade		15,856	15,797	59	0.4%	15,524	331	2%	15.24
Professional and Business Services		20,567	19,928	639	3.2%	17,886	2,681	15%	25.93
Education & Health Care		22,970	22,443	527	2.3%	18,507	4,463	24%	22.85
Education		3,624	3,534	90	2.5%	2,926	698	24%	n.a.
Health Care & Social Assistance		19,346	18,909	437	2.3%	15,581	3,764	24%	n.a.
Leisure & Hospitality		15,795	15,537	258	1.7%	13,363	2,432	18%	13.25
Financial Activities		8,409	8,231	178	2.2%	8,379	30	0%	26.37
Finance and Insurance		6,223	6,111	112	1.8%	6,206	18	0%	n.a.
Real Estate, Rental & Leasing		2,186	2,121	66	3.1%	2,174	13	1%	n.a.
Information		2,747	2,779	-32	-1.2%	3,030	-283	-9%	30.46
Other Services		5,724	5,670	54	1.0%	5,484	240	4%	n.a.

Source: Bureau of Labor Statistics, own calculations. © Lighthouse 2017

- Above table shows employment changes over the past 12 months, over the past 10 years and average hourly wage (in USD) per sector.
- Sectors showing weak employment trends over the past 10 years (Goods Producing, Information) are also weak over the past 12 months (exception: Construction)
- Hourly wages<sup>3</sup> differ greatly between Leisure & Hospitality (\$13 per hour) and Utilities (\$36 per hour)

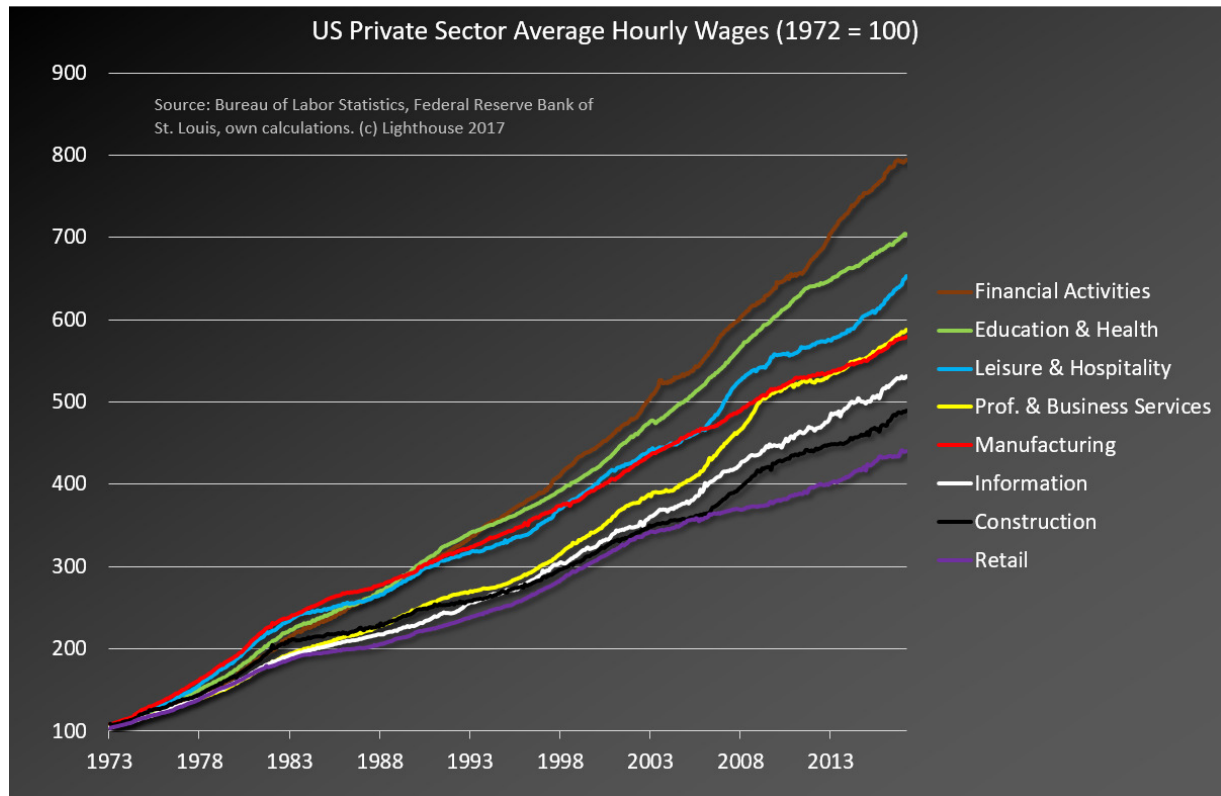
<sup>3</sup> Non-supervisory employees only (in order not to distort the average by bosses' higher salaries)

### Hourly Wages by Sector



- Hourly wages by sector are an interesting subset of data
- Jobs demanding a more specialized skillset are can usually demand higher wages

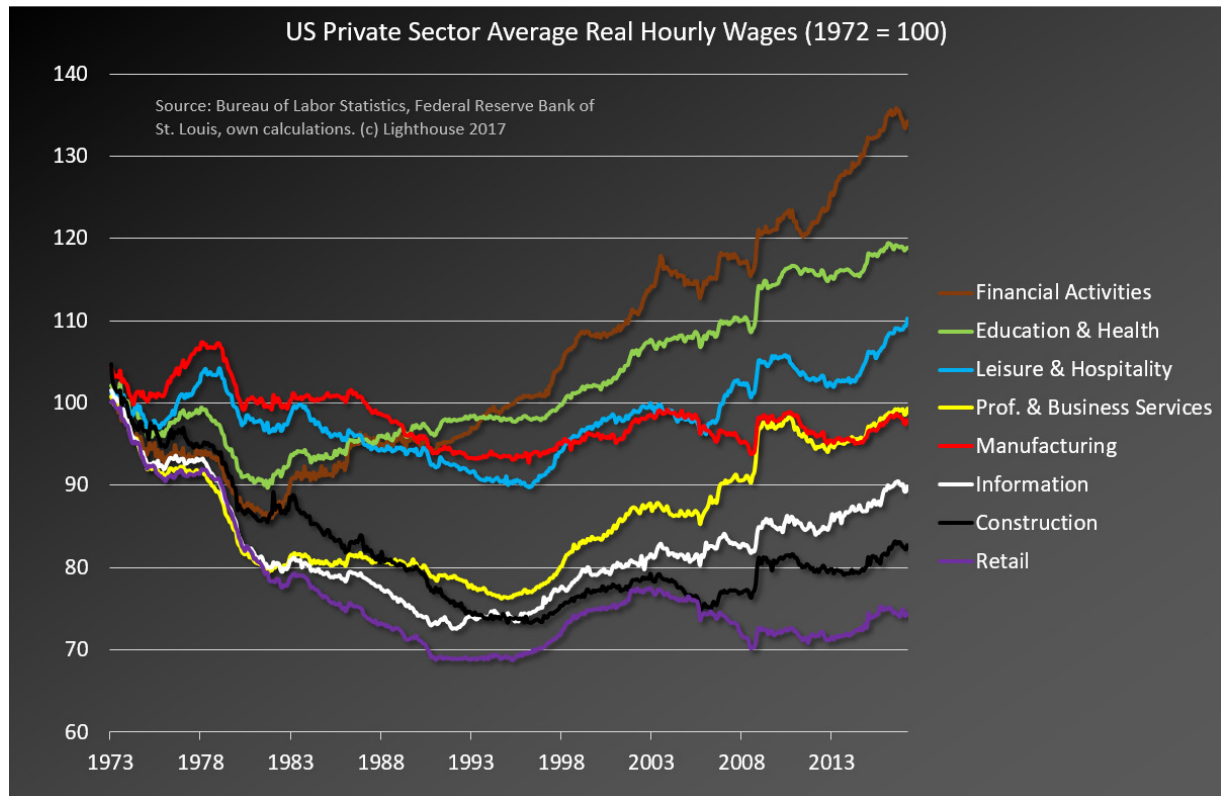
### Indexed Hourly Wages by Sector



- Indexed to a common starting point we see that wages in Financial Activities have fared best relative to other professions
- Hard manual labor in Construction still pays relatively well, but less so than 45 years ago



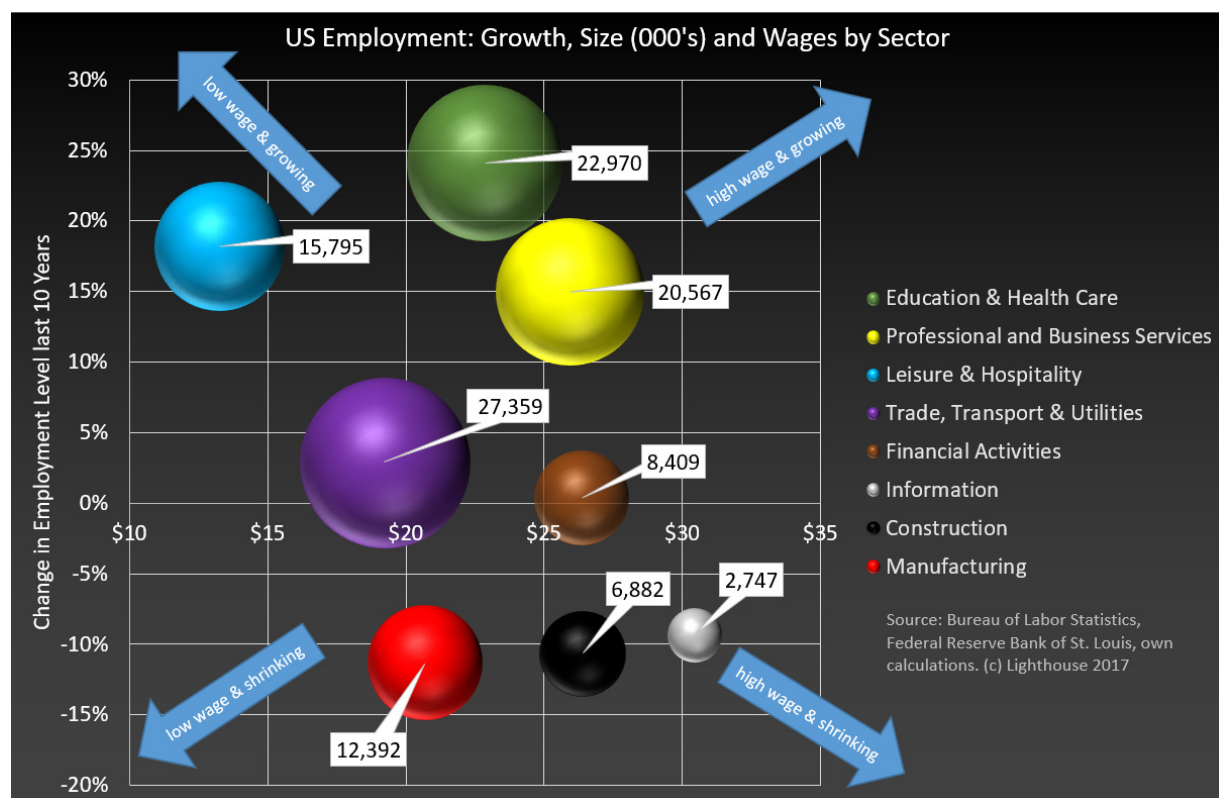
### Real Indexed Hourly Wages by Sector



- Since 1972 the US Dollar has lost 83% of its purchasing power (if deflated by consumer price index)
- Adjusting wages by the consumer price index shows the above picture: employees in all but three sectors suffered real wage losses (cost of living went up faster than their wages)
- Especially damaging were the 1970's and early 1980's with inflation spiking to 12% (1975) and 14.5% (1980) following oil price shocks.
- You could think that a decline in real wages would benefit companies. However, raw material and energy input costs rose even faster than companies were able to adjust output prices. Interest rates soared, and the Federal Reserve Bank had to hike interest rates to 20% (1981) in order to get inflation under control. This in turn led to back-to-back recessions in 1980 and 1982, costing a lot of jobs.

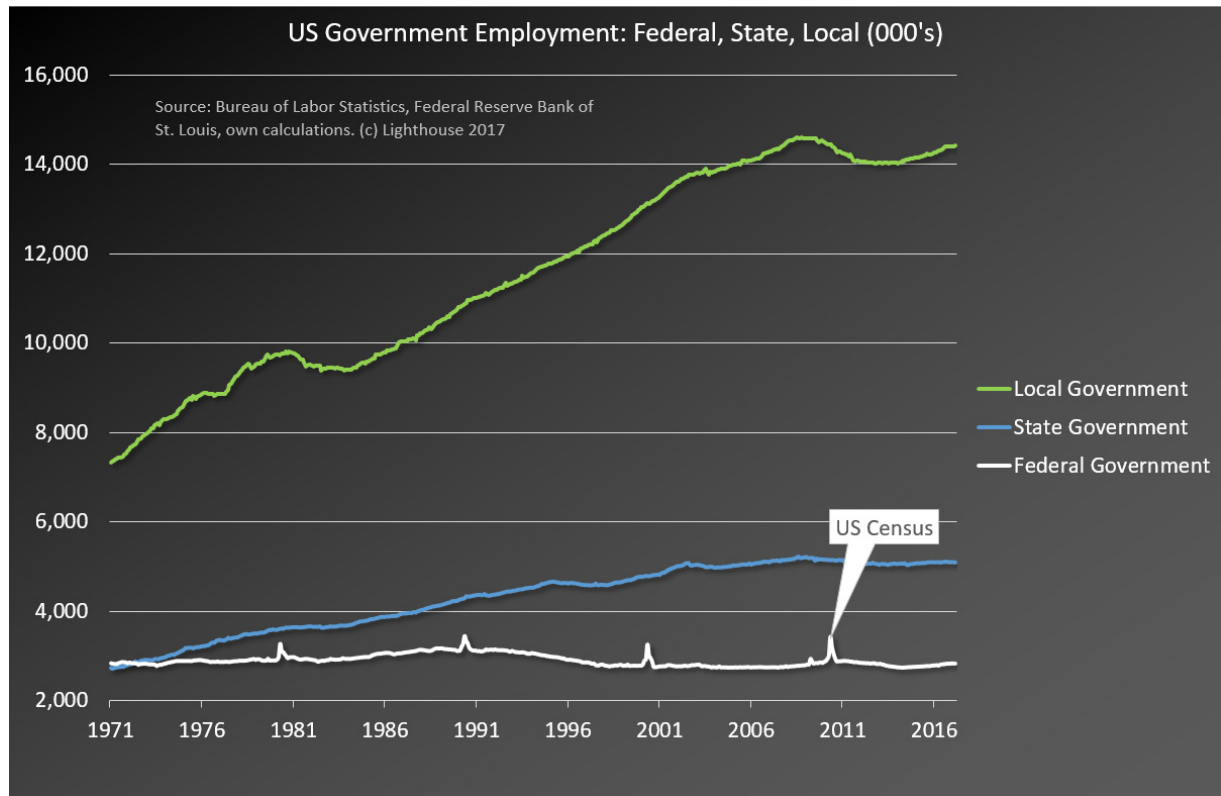


## Dynamic View of Employment



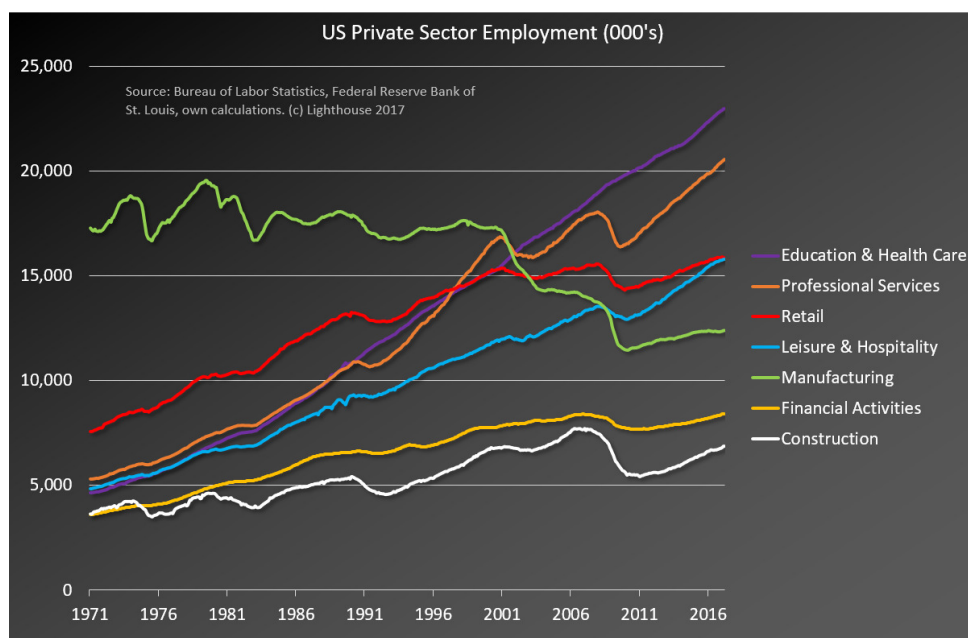
- Combining 10-year change in employment (y axis), average hourly wage (x axis) and number of employees (bubble size) you get the picture shown above
- Sectors to the upper right are growing with above-average wages, while those to the bottom left are shrinking with below-average wages
- The retail sector is contained within "Trade, Transport & Utilities" (too many bubbles would make the chart hard to read). In the next recession, an "exotic pet store" (retail) however will be swept away just as the "New York Nails" salon (personal services). So it might pay off to look further under the hood of certain sectors.

### Government Employment

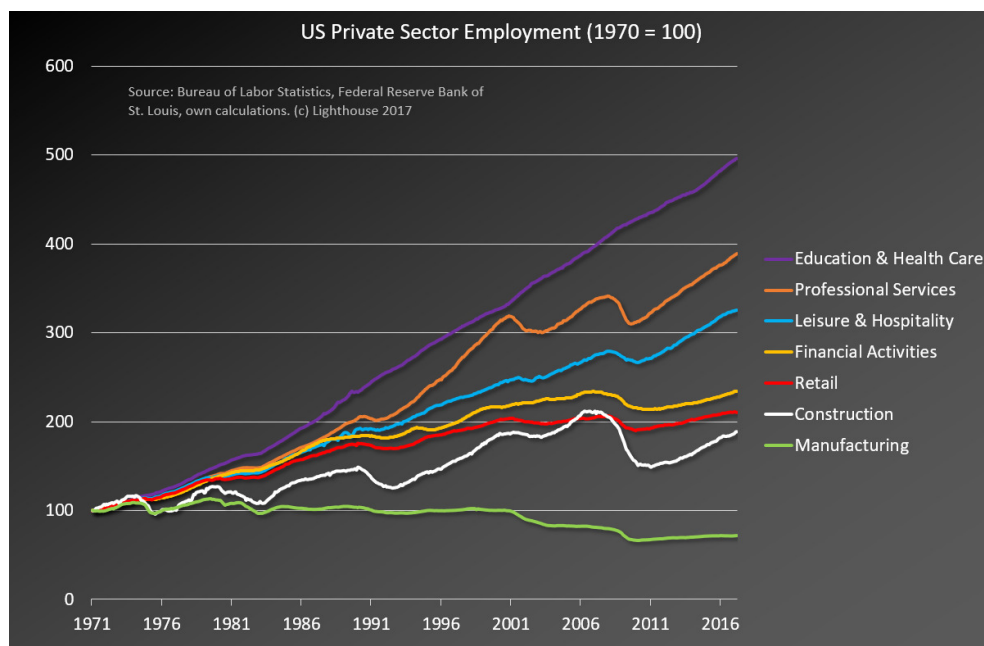


- First, a look at government employment
- Surprisingly, on a federal level, government is run with roughly the same number of employees than 45 years ago
- All growth has been on state and local level (+100% each)
- The little bumps in federal government employment every ten years are temporary hiring for the US census

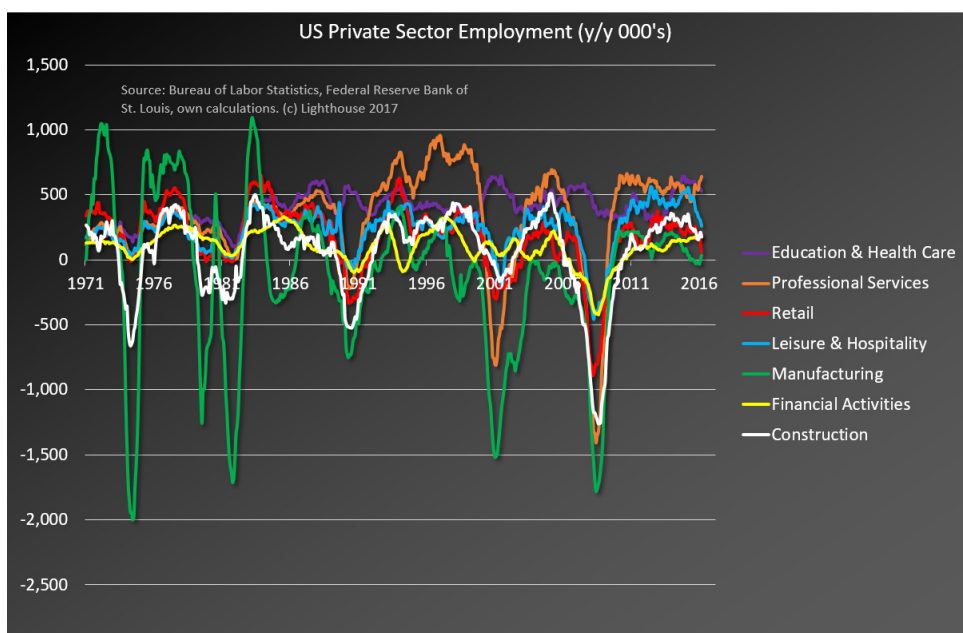
## Private Sector



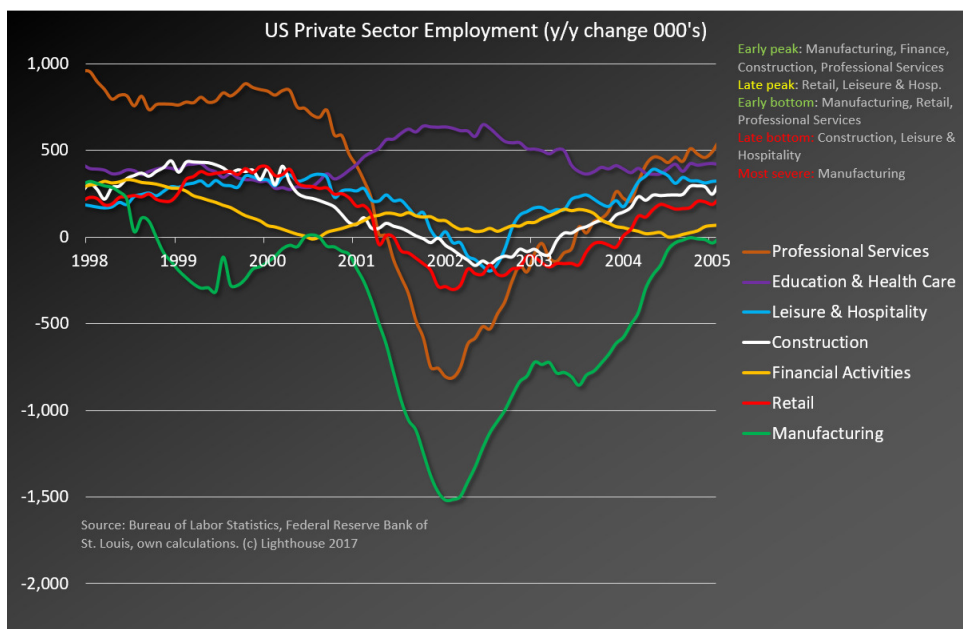
- Manufacturing employment had its peak in 1979. It has been going downhill ever since, with each recession leading to accelerated job losses
- Education & Health Care is pretty recession-proof



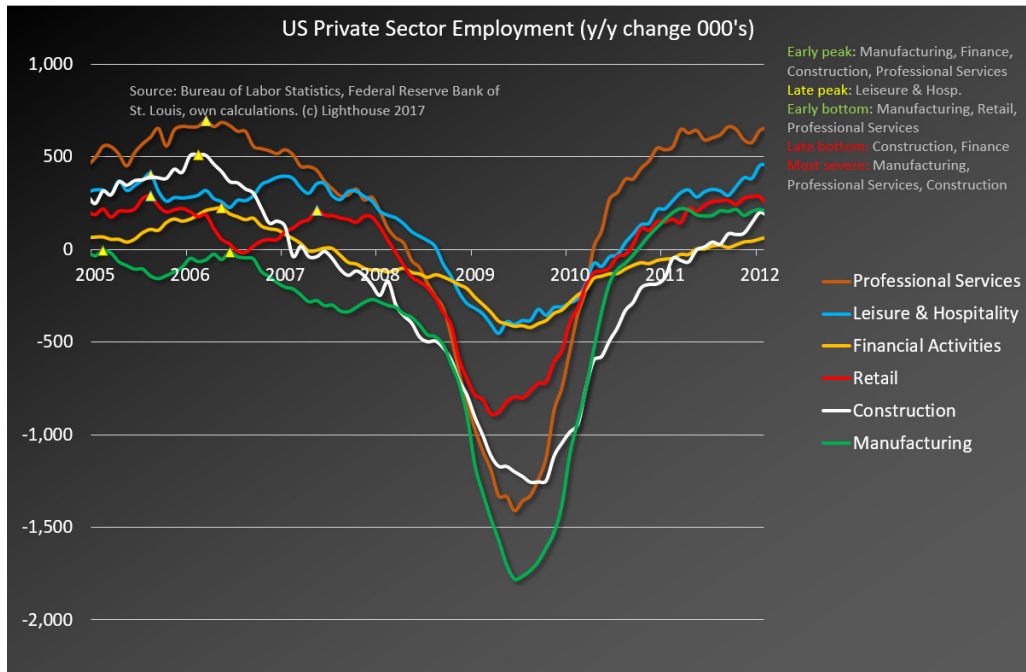
## Employment in Recessions



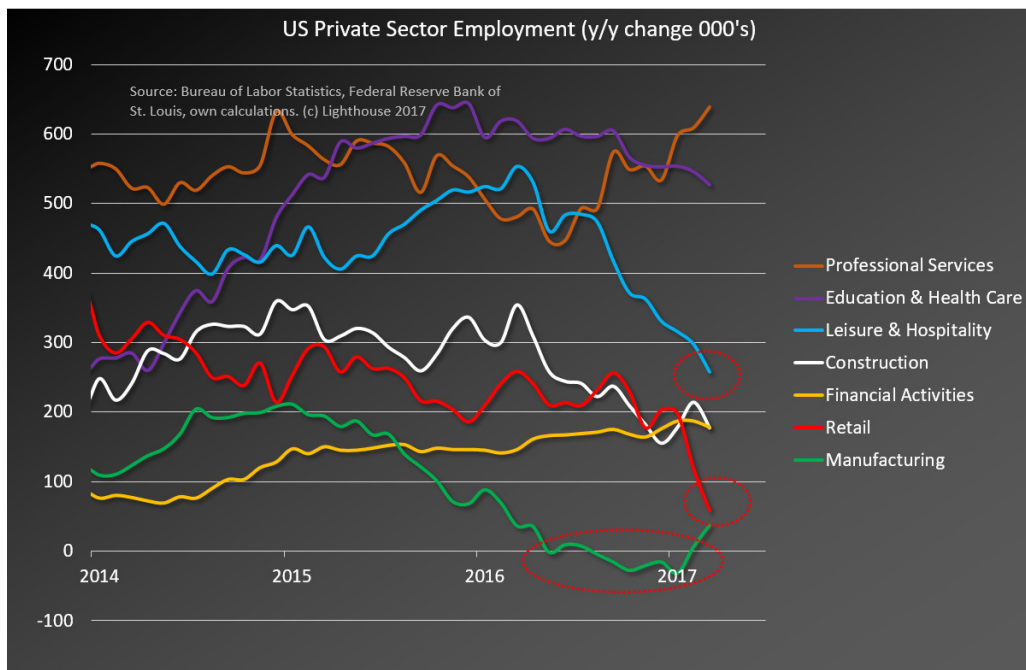
- You can see how recessions took their toll mainly on Manufacturing and Construction in the 1970's and 1980's, but are joined by Professional Services and Retail in 2001 and 2008/9
- You can see in which sectors employment peaks and bottoms first as well as the laggards



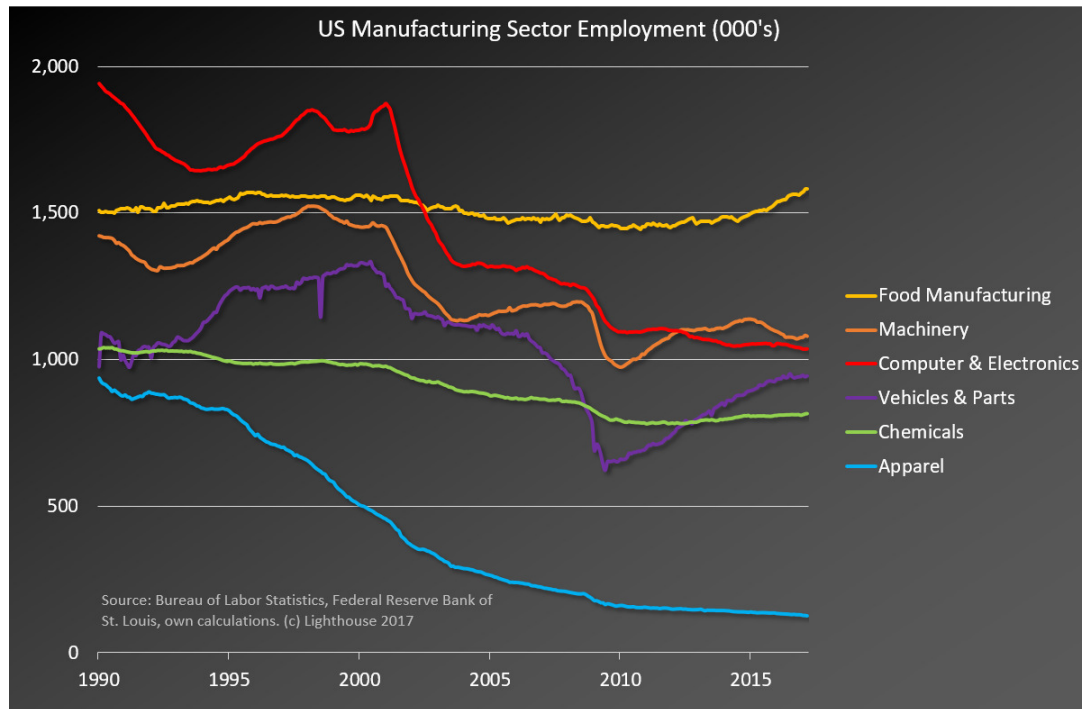
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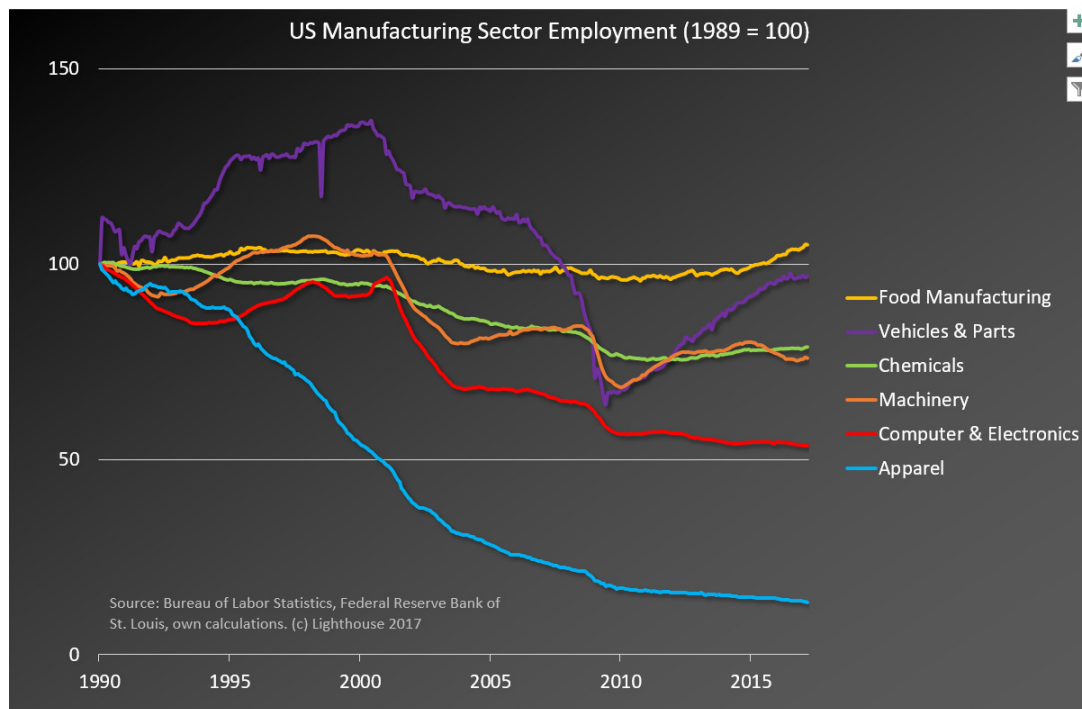
- Employment growth peaks well before a recession start (see above)
- Current data shows weakness in three sectors (see below)



## Manufacturing

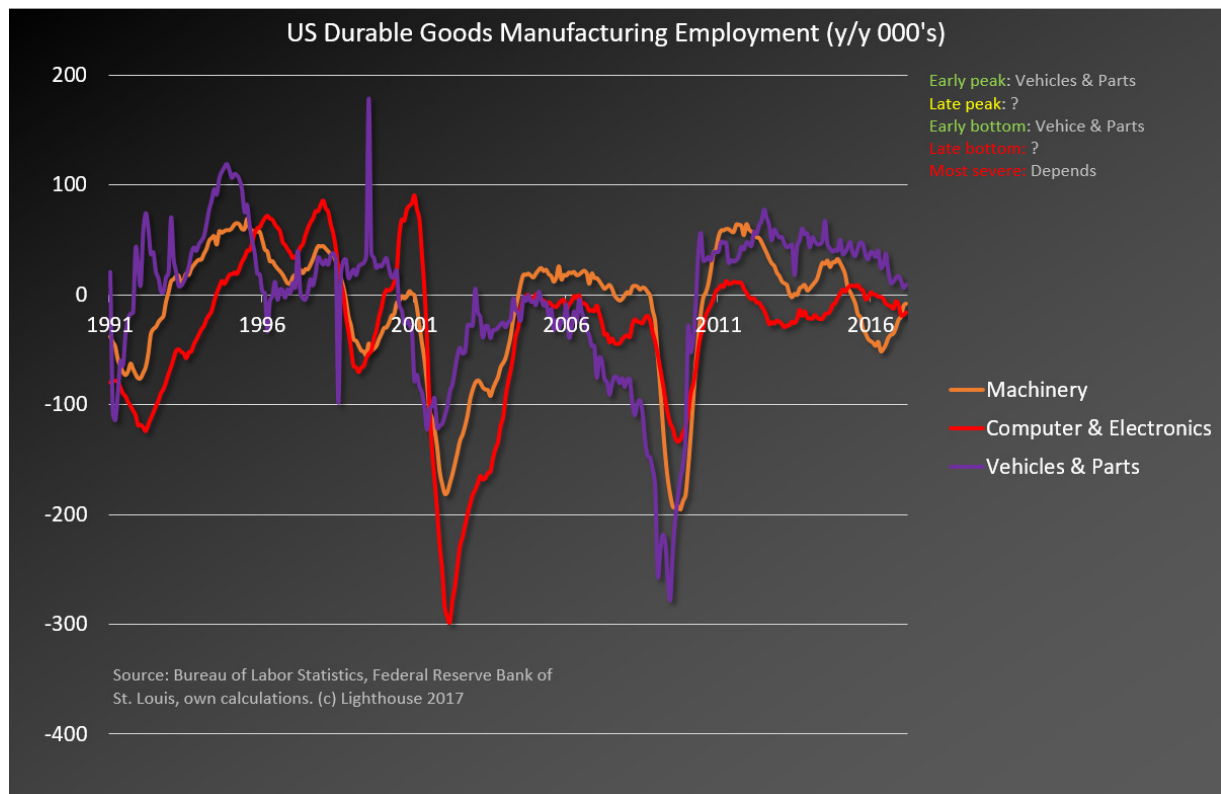


- Within a sector you can see where outsourcing happens (Apparel, Computers) and where it does make less sense (Food Manufacturing)





## Lighthouse Investment Management



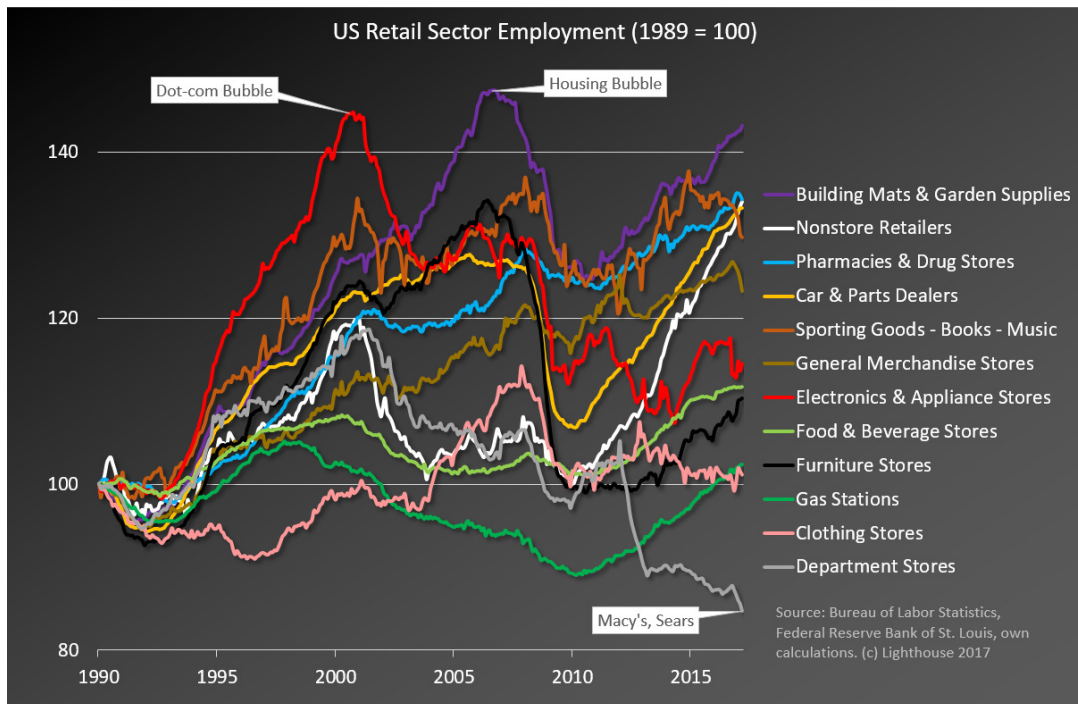
- You can look at the more cyclical subsectors and see differences from one recession to the other
- Computer & Electronics was the manufacturing sector with the largest job losses after the bursting of the dot-com-bubble (2001) while Vehicle and Parts manufacturing took the crown in 2008/9 as consumer finance dried up

# Lighthouse Investment Management

## Retail

Employees in Thousands		Employment	Change in Employment m/m						Change in Employment m/m (in % of total)						year ago	change	% change	10 yrs ago	change	% change	Hourly earnings
		Mar-17	Mar	Feb	Jan	Dec	Nov	Oct	Mar	Feb	Jan	Dec	Nov	Oct	Mar-16			Mar-07			
Service Providing		103,571	61	125	153	118	143	123	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	101,755	1,816	1.8%	93,245	10,326	11%	21.73
Trade, Transport & Utilities		27,359	-27	-16	28	28	15	9	-0.1%	-0.1%	0.1%	0.1%	0.1%	0.0%	27,167	192	0.7%	26,596	763	3%	19.24
Utilities		554	-1	-1	-1	0	0	0	-0.1%	-0.1%	-0.1%	0.0%	0.1%	0.1%	556	-1	-0.2%	549	5	1%	36.32
Transport & Warehousing		5,047	4	8	-13	13	22	12	0.1%	0.2%	-0.3%	0.3%	0.4%	0.2%	4,958	89	1.8%	4,535	511	11%	21.14
Trucking		1,477	5	9	-2	3	2	6	0.3%	0.6%	-0.1%	0.2%	0.1%	0.4%	1,452	25	1.7%	1,452	25	2%	n.a.
Warehousing & Storage		945	0	-2	5	3	8	6	0.0%	-0.2%	0.5%	0.3%	0.8%	0.6%	898	47	5.3%	656	289	44%	n.a.
Wholesale Trade		5,902	0	8	6	2	6	4	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	5,856	46	0.8%	5,987	-85	-1%	24.51
Retail Trade		15,856	-30	-31	35	13	-13	-7	-0.2%	-0.2%	0.2%	0.1%	-0.1%	0.0%	15,797	59	0.4%	15,524	331	2%	15.24
Car & Parts Dealers		2,010	0	4	5	3	6	5	0.0%	0.2%	0.2%	0.1%	0.3%	0.2%	1,973	37	1.9%	1,914	96	5%	n.a.
Furniture Stores		486	1	1	7	2	2	-3	0.2%	0.1%	1.4%	0.4%	0.4%	-0.6%	472	14	3.0%	582	-96	-17%	n.a.
Electronics & Appliances		517	4	-5	9	-2	1	-20	0.8%	-1.0%	1.7%	-0.4%	0.1%	-3.8%	528	-11	-2.1%	583	-66	-11%	n.a.
Building Mats & Garden		1,291	5	1	2	2	0	2	0.4%	0.0%	0.2%	0.2%	0.0%	0.1%	1,269	22	1.7%	1,318	-27	-2%	n.a.
Food & Beverage Stores		3,100	2	-1	2	-3	3	1	0.1%	0.0%	0.1%	-0.1%	0.1%	0.0%	3,083	17	0.6%	2,833	267	9%	n.a.
Pharmacies & Drug Stores		1,060	-4	-2	1	5	7	1	-0.4%	-0.2%	0.0%	0.5%	0.7%	0.1%	1,045	15	1.4%	985	74	8%	n.a.
Gas Stations		939	1	2	1	5	-4	1	0.1%	0.2%	0.1%	0.5%	-0.4%	0.1%	921	17	1.9%	866	73	8%	n.a.
Clothing Stores		1,352	-6	-5	22	15	-14	-12	-0.4%	-0.4%	1.6%	1.1%	-1.0%	-0.9%	1,358	-6	-0.5%	1,489	-138	-9%	n.a.
Sporting, Books, Music		601	-2	-9	-4	-2	-2	0	-0.3%	-1.4%	-0.6%	-0.4%	-0.3%	0.0%	626	-25	-4.0%	620	-19	-3%	n.a.
Department Stores		1,272	-13	-7	-10	-8	-8	3	-1.0%	-0.5%	-0.8%	-0.6%	-0.7%	0.3%	1,311	-39	-3.0%	1,591	-319	-20%	n.a.
General Merchandise		3,109	-35	-23	-13	-11	-7	10	-1.1%	-0.8%	-0.4%	-0.4%	-0.2%	0.3%	3,160	-51	-1.6%	3,027	82	3%	n.a.
Non-Store Retailers		556	2	3	4	3	2	2	0.4%	0.6%	0.7%	0.6%	0.3%	0.3%	532	23	4.4%	436	120	27%	n.a.

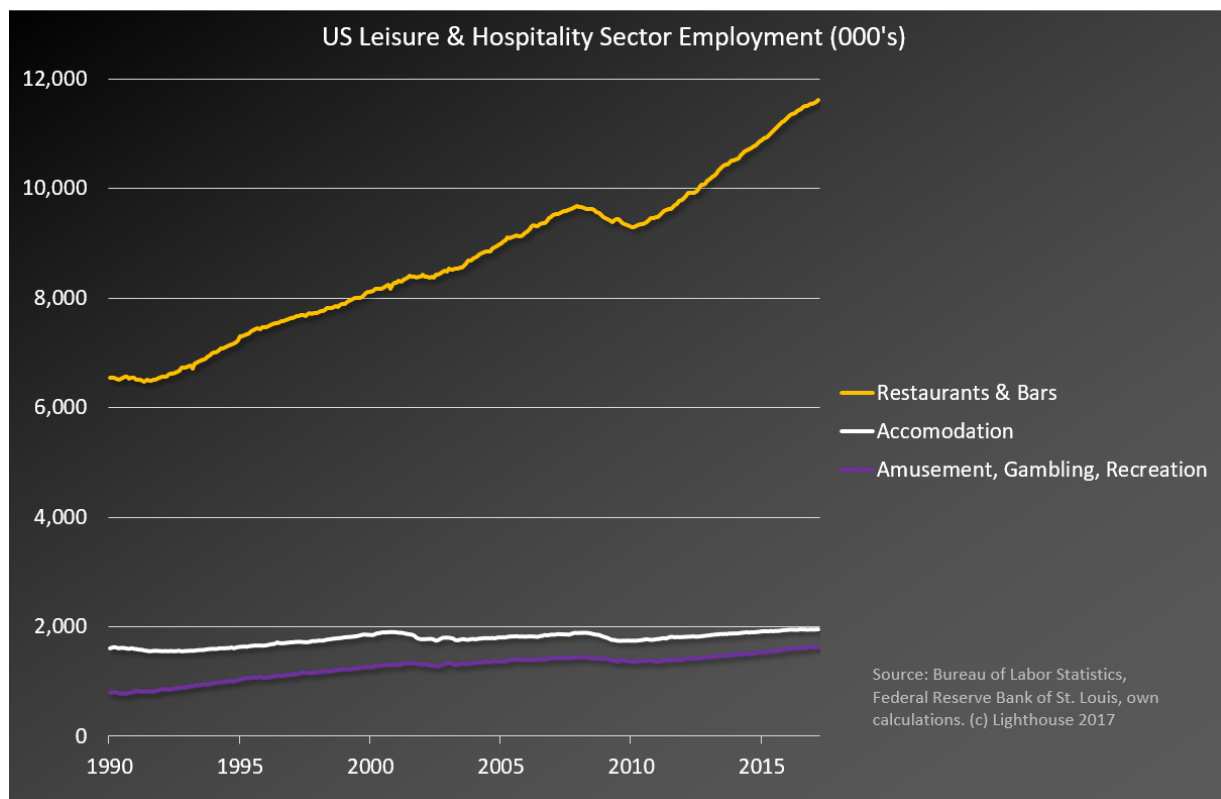
- One of the subsectors with the strongest employment growth over the past 10 year is Warehousing & Storage (+44%). We can assume Amazon warehouses to be responsible for a large part of the growth. In absolute terms, however, the growth is not significant (289,000 employees), and the wages are probably not great either.
- Amazon replaces jobs in Department Store (319,000), Clothing (138,000), Sporting, Music and Book stores (19,000). General Merchandise is beginning to suffer, and Amazon is rumored to move in to furniture next
- You find “footprints” of macro-economic events in the retail subsectors:



## Leisure & Hospitality

Employees in Thousands	Employment	Change in Employment m/m						Change in Employment m/m (in % of total)						year ago	change	% change	10 yrs ago	change	% change	Hourly earnings
	Mar-17	Mar	Feb	Jan	Dec	Nov	Oct	Mar	Feb	Jan	Dec	Nov	Oct	Mar-16	Mar-16	Mar-16	Mar-07	Mar-07	Mar-07	Mar-07
Leisure & Hospitality	15,795	9	27	15	5	44	11	0.1%	0.2%	0.1%	0.0%	0.3%	0.1%	15,537	258	1.7%	13,363	2,432	18%	13.25
Amusement, Gamble, Recreation	1,631	-7	5	-2	-11	20	10	-0.4%	0.3%	-0.1%	-0.7%	1.3%	0.6%	1,614	17	1.1%	1,429	202	14%	n.a.
Accommodation	1,950	0	3	-3	2	4	-6	0.0%	0.2%	-0.1%	0.1%	0.2%	-0.3%	1,945	5	0.3%	1,865	85	5%	n.a.
Food & Drinking Places	11,607	22	19	18	15	24	12	0.2%	0.2%	0.2%	0.1%	0.2%	0.1%	11,363	244	2.1%	9,536	2,072	22%	n.a.

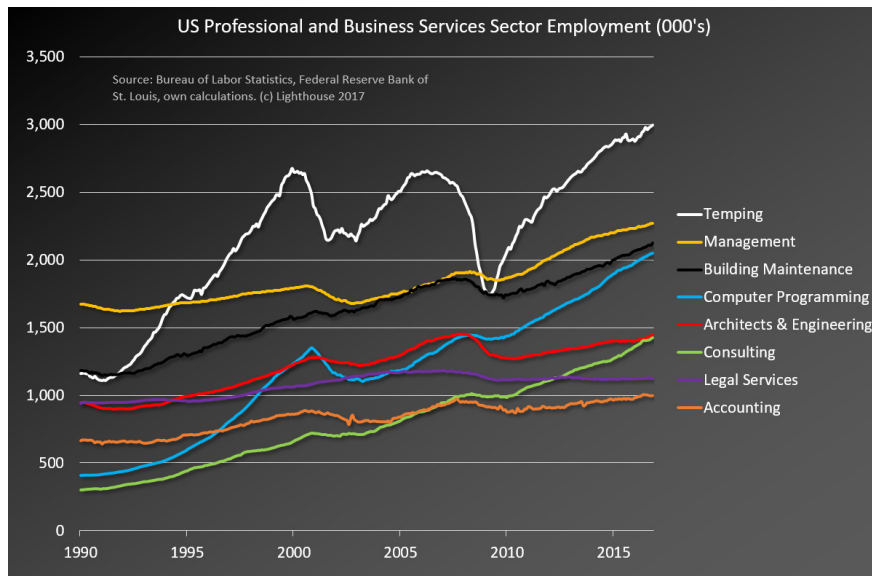
- Leisure & Hospitality is mainly made up of cooks, waitresses and bartenders, often in fast-food places, employed at very low salaries (average hourly wage \$13)
- Eating out is deeply engraved into the American psyche, and often it is cheaper to eat out than to cook yourself, but when push comes to shove restaurant visits are still discretionary spending that is easy to cut down on



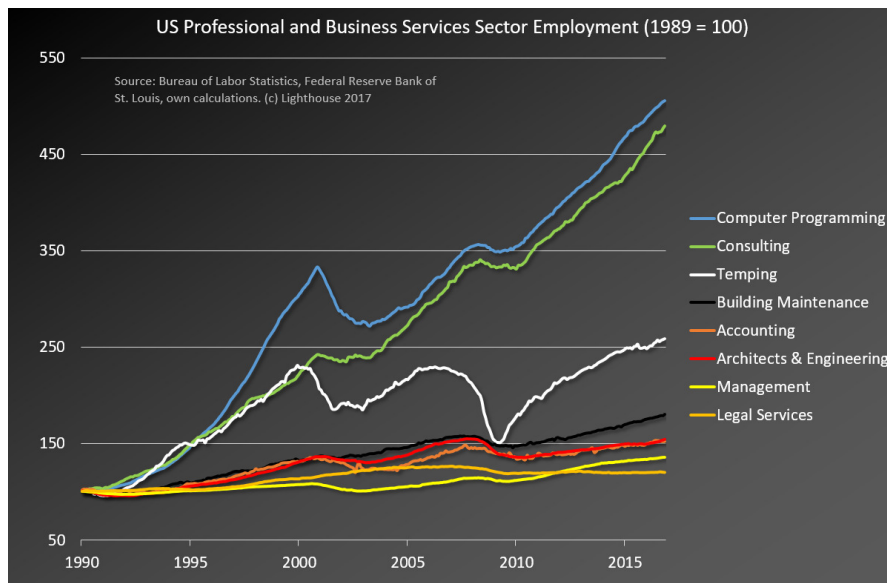
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## Professional & Business Services

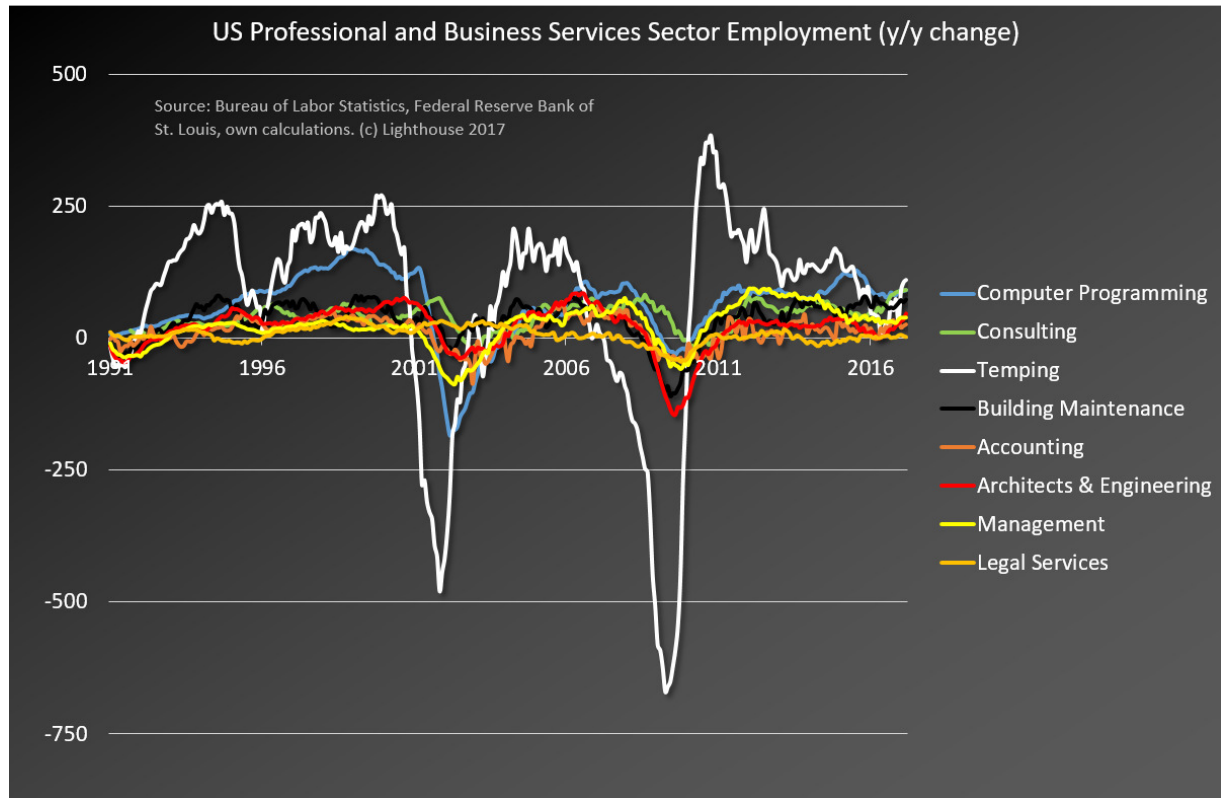
Employees in Thousands		Employment	Change in Employment m/m						Change in Employment m/m (in % of total)						year ago	change	% change	10 yrs ago	change	% change	Hourly earnings
		Mar-17	Mar	Feb	Jan	Dec	Nov	Oct	Mar	Feb	Jan	Dec	Nov	Oct	Mar-16			Mar-07			
Professional and Business Services		20,567	56	36	59	36	46	55	0.3%	0.2%	0.3%	0.2%	0.2%	0.3%	19,928	639	3.2%	17,886	2,681	15%	25.93
Legal Services		1,122	-2	-3	0	4	0	1	-0.1%	-0.2%	0.0%	0.3%	0.0%	0.1%	1,120	2	0.2%	1,177	-55	-5%	n.a.
Accounting		995	1	-1	-5	0	-2	5	0.1%	-0.1%	-0.5%	0.0%	-0.2%	0.5%	969	26	2.7%	922	72	8%	n.a.
Architects & Engineers		1,448	7	5	8	5	2	5	0.5%	0.4%	0.5%	0.4%	0.1%	0.4%	1,402	46	3.3%	1,423	24	2%	n.a.
Computer Programming		2,051	5	6	9	7	5	7	0.2%	0.3%	0.5%	0.3%	0.2%	0.4%	1,960	91	4.6%	1,343	708	53%	n.a.
Consulting		1,426	8	9	1	3	-3	9	0.6%	0.6%	0.1%	0.2%	-0.2%	0.6%	1,341	85	6.3%	930	497	53%	n.a.
Management		2,269	1	4	5	6	3	3	0.0%	0.2%	0.2%	0.3%	0.1%	0.1%	2,230	39	1.8%	1,842	427	23%	n.a.
Admin & Support		8,801	33	10	27	2	40	19	0.4%	0.1%	0.3%	0.0%	0.5%	0.2%	8,530	270	3.2%	8,118	683	8%	n.a.
Temping		2,996	11	9	15	-17	26	13	0.4%	0.3%	0.5%	-0.6%	0.9%	0.4%	2,886	110	3.8%	2,636	360	14%	n.a.
Building Maintenance		2,123	17	-2	6	9	4	7	0.8%	-0.1%	0.3%	0.4%	0.2%	0.3%	2,049	74	3.6%	1,843	280	15%	n.a.



- Professional and Business Services are paid above average and show good growth
- Only the indexed view (below) shows how much Computer Programming and Consulting is outshining the other subsectors



## Lighthouse Investment Management



- Temporary workers, of course, are the easiest to fire (their contract just not being extended), and they take the brunt of job losses during a recession

## Conclusion

- The BLS's monthly employment report contains more data than it is usually credited for
- Diving into the sectors and sub-sectors makes trends such as outsourcing and the "amazonification" of consumption visible
- Employment trends within cyclical sectors or sub-sectors can give early indications regarding a looming recession
- Employment growth in the current economic cycle has most likely peaked
- Employment in manufacturing is close to stall speed with weakness in machinery. Disappointing car sales should soon show up in job numbers in Vehicle & Parts manufacturing.
- Largest job losses are occurring in the retail sector with General Merchandise, Department Stores and Clothing being the most hard hit
- For now, gains in Professional & Business Services as well as Education & Health Care are more than compensation for above mentioned losses
- It is therefore too early to call a recession

Any questions or feedback welcome.

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