nova WORKFORCE REVIEW

December 2017

A monthly review of labor market information for Northern Santa Clara County

Beneath the U.S. job numbers

Tech's influence on the workforce continues to hollow out the labor market

Like clockwork, the start of each month brings the latest update on U.S. job numbers from the U.S. Bureau of Labor Statistics (BLS).

Vital to assembling a momentary look at the job market's latest trends, the report will support a pulse of urgent and useful news stories with its mixed and sometimes blurry data points on such topics as job growth and unemployment.

And yet, for all that, the jobs report remains in many ways a distraction from the most important longer-term trend lines and macro forces.

For example, don't bet on the new numbers shedding much light on one of the most profound labor-market trends of all—one highlighted by our brand-new report on the "digitalization" of the U.S. economy.

This trend is the extraordinary "hollowing out" of the job market that finds the nation's high-skill and low-skill occupational groups growing even as middle-skill job categories sag.

Associated in our view with the formidable ability of digital technology to both empower workers and polarize outcomes, the hollowing out trend isn't always recognizable in the real-time read out of the job report, but over time it is adding up inexorably, as can be seen [below] in one of the disconcerting exhibits in our report.

What's going on with this "U-shaped" picture of the nation's job problems? In our view, following the insights of the MIT economist David Autor and others, the increasing adoption of computer technology has led in recent decades to rapid employment growth at the upper and lower ends of the skill distribution, combined with extremely sluggish growth in the middle of the continuum. For example, job creation has been relatively robust since 2010 for both highly digital computer-mathematical and business-finance occupational groups, as well as in low-digital occupational fields such as healthcare support and food preparation. By contrast, mid-digital occupational groups like office administration and sales have seen much slower job growth.

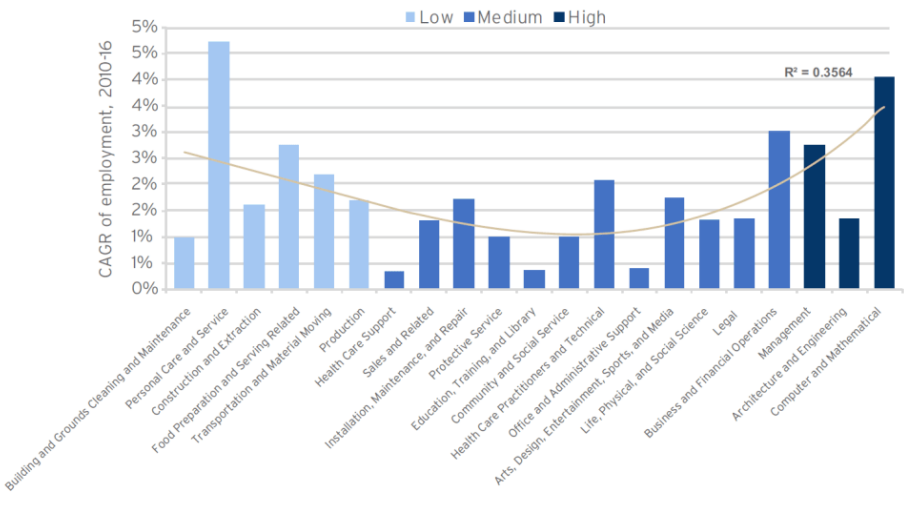
Why is this happening? This is what Autor and others call "routine-biased technical change" at work. As explained in our report, digital technologies tend to complement non-routine, complex creative work such as that done by highly skilled workers even as it substitutes for the rote, repetitive work of many traditional middle-skill, middle- digital occupations. As to the low end of the skills distribution, it appears that rising employment in some low-digital occupations reflects a strong shift of work into face- to-face personal service occupations supported by increased demand from well- compensated high digital consumers.

In short, while it isn't always recognizable in the monthly ups and downs of the jobs report, the steady unfolding of the U-shaped labor market remains the skull beneath the skin—a stubborn reality amid the incidental noise of the changing economy. Keeping this curve and these bars in mind while the pundits and reporters process the newest flow of data on job growth or labor market participation would be well worth doing.

FIGURE 9

Compound annual growth rate of employment by occupation group, 2010-2016

Occupation groups arrayed by 2016 mean digital scores



Source: Brookings analysis of O*NET and OES data
Note: Farming, Fishing, and Forestry occupations are excluded due to small employment size.

Source: *Brookings* (12/06/17)
http://brook.gs/2BJ7L18

nova WORKFORCE DEVELOPMENT

DECEMBER 2017

NATIONAL *Focus*

UNEMPLOYMENT

Region	November 2016	October 2017	November 2017	Percentage Point Change 1 month	Percentage Point Change 12 months
San José MSA	3.6%	3.0%	2.7%	– 0.3	– 0.9
San Francisco MD	3.0%	2.6%	2.2%	– 0.4	– 0.8
California	5.0%	4.3%	4.0%	– 0.3	– 1.0
United States	4.4%	3.9%	3.9%	0.0	– 0.5

INDUSTRY EMPLOYMENT

Sector — November 2017	San Jose MSA	San Francisco MD	Combined Region	Percentage Change *(Combined Region)* 1 month	Percentage Change *(Combined Region)* 12 months
Total Nonfarm	**1,110,900**	**1,134,900**	**2,245,800**	**+ 0.9%**	**+ 1.9%**
Construction	50,000	43,600	93,600	+ 2.4%	+ 2.4%
Manufacturing	169,300	38,100	207,400	+ 0.6%	+ 3.1%
Retail Trade	89,400	84,200	173,600	+ 3.6%	– 1.2%
Information	79,600	74,200	153,800	+ 0.9%	+ 4.0%
Professional & Business Services	230,600	275,900	506,500	+ 1.0%	+ 0.3%
Educational Services	47,200	30,200	77,400	+ 2.2%	+ 2.9%
Health Care & Social Services	124,800	110,700	235,500	+ 0.8%	+ 4.8%
Hospitality & Leisure	107,900	144,100	252,000	– 0.3%	+ 4.9%
Government	99,500	131,600	231,100	+ 1.0%	+ 1.2%

NOTE: San José MSA (San José-Sunnyvale-Santa Clara Metropolitan Statistical Area) = Santa Clara and San Benito Counties
San Francisco MD (San Francisco-Redwood City-South San Francisco Metropolitan Division) = San Mateo and San Francisco Counties

Source: California Employment Development Department, LMID

LABOR FORCE & ANNUAL CHANGE

Labor Force by Metropolitan Statistical Area *(U.S. High-Tech Regions)*

	LABOR FORCE			UNEMPLOYMENT			UNEMPLOYMENT RATE		
	November 2016	November 2017	*Change*	November 2016	November 2017	*Change*	November 2016	November 2017	*Change*
United States	**159,456,000**	**160,529,000**	**+ 0.1%**	**7,409,000**	**6,610,000**	**– 10.8%**	**4.6%**	**4.1%**	**– 0.5**
California	19,157,600	19,344,400	+ 1.0%	963,900	775,500	– 19.5%	5.0%	4.0%	– 1.0
San Diego	1,576,100	1,584,700	+ 0.5%	68,200	51,500	– 24.5%	4.3%	3.3%	– 1.0
San Francisco	1,014,400	1,028,100	+ 1.4%	29,900	22,800	– 23.7%	3.0%	2.2%	– 0.8
San José	1,061,900	1,072,900	+ 1.0%	38,000	28,700	– 24.5%	3.6%	2.7%	– 0.9
Austin, TX	1,124,627	1,146,697	+ 2.0%	35,932	31,314	– 12.9%	3.2%	2.7%	– 0.5
Boston, MA	2,654,514	2,683,488	+ 1.1%	68,243	80,569	+ 18.1%	2.6%	3.0%	+ 0.4
New York City, NY	9,496,300	9,644,800	+ 1.6%	428,300	431,600	+ 0.8%	4.5%	4.5%	0.0
Seattle, WA	1,636,900	1,658,800	+ 1.3%	61,700	62,800	+ 1.8%	3.8%	3.8%	0.0
NOVA Workforce Area	777,800	787,900	+ 1.3%	22,100	16,600	– 2.1%	2.8%	2.1%	– 0.7

NOTE: Totals may not add correctly due to rounding

Source: California Employment Development Department, LMID

REGIONAL LAYOFF ACTIVITY

November 2017 Events

Company	Location	# Affected
CPI	Palo Alto	7
Infinera	Sunnyvale	74
Marvell Semiconductor	Santa Clara	5
	Total	**86**

WARN SUMMARY

Events YTD†:	24
Individuals Affected YTD :	1,844
Individuals Previous YTD ‡:	2,077

* **WARN:** Worker Adjustment and Retraining Notification *(notice of mass layoff or closure)*

† **YTD:** Year to Date *(Program year: July 1–June 30)*

‡ **Previous YTD:** No data available for San Mateo County, FY2014/15

NOTE: Layoff data are preliminary and should be considered an estimate of monthly regional activity

Source: NOVA's internal Rapid Response database